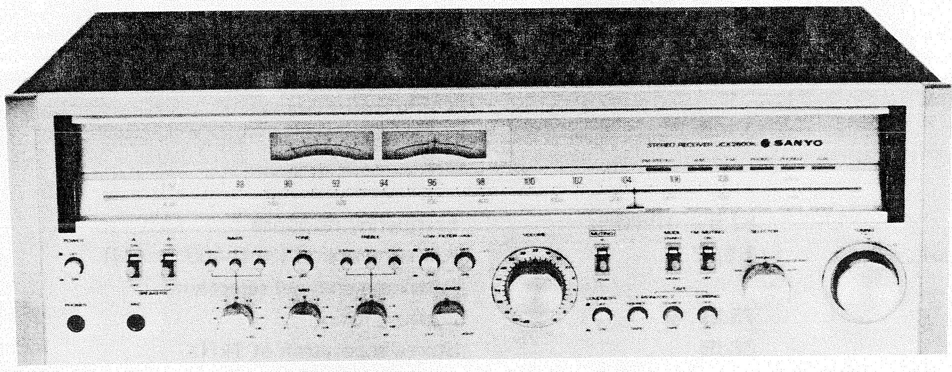
SERVICE MANUAL

SANYO

STEREO RECEIVER

JCX2600KR

(SCAN)



INDEX

	Page
Specifications	1
Tuner Adjustment	2-4
Parts Location	5
Dial Cord Stringing	6
Cabinet Exploded view	7
Parts List	8-13
Chassis Exploded view	14, 15
Wiring Diagram	16 ~ 21
Tuner schematic diagram	22
Schematic diagram	23

WM-3340

SPECIFICATIONS

Power Amplifier Section

Continuous power	120 watts x 2 (at 4 ohms), 100 watts x 2 (at 8 ohms) (1% Distortion)
Total harmonic distortion	0.01% (1kHz, 85W output, 8 ohms)
Input sensitivity/Impedance	1V/50k ohms
Damping factor	60 (at 8 ohms)

Pre-Amplifier Section

Input sensitivity and impedance			
PHONO 1	2.5mV/50k ohms	Tone control response	
PHONO 2	2.5mV/50k ohms	BASS at 100Hz (T.O.) 400Hz	±10dB
MIC	6.5mV/50k ohms	TREBLE at 10kHz (T.O.) 2.5kHz	±10dB
AUX	150mV/50k ohms	MID at 1kHz	±5dB
TAPE PLAY 1	150mV/50k ohms	Low filter response	30Hz (–12dB/oct.)
TAPE PLAY 2	150mV/50k ohms	High filter response	8kHz (–6dB/oct.)
TAPE PLAY 2 (DIN)	150mV/50k ohms	Loudness control response	
Phono overload level		Volume set –30dB position at 100Hz	+10dB
PHONO 1/PHONO 2	150mV	Volume set –30dB position at 10kHz	+4dB
Output level		Hum and noise ratio	
TAPE REC 1	150mV	PHONO 1/PHONO 2	70dB
TAPE REC 2	150mV	AUX	90dB
TAPE REC 2 (DIN)	30mV/80k ohms		
PRE OUT	1V/2.2k ohms		
Frequency response			
PHONO 1/PHONO 2 (RIAA 20Hz – 20kHz)	±0.2dB		
AUX (20Hz – 20kHz)	±1dB		

FM Tuner Section

Frequency range	87.5 – 108MHz	Frequency response	30Hz – 15kHz (±3dB
Usable sensitivity (at Mono)	1.5μV	AM suppression (30% 400Hz AM)	60dB
Signal-to-noise ratio		Alternate channel selectivity	55dB (DIN)
at Mono	73dB	Capture ratio	1.2dB
at Stereo	66dB	Stereo separation at 1kHz	46dB
Harmonic distortion		Aerial input	300 ohms balanced 75 ohms unbalanced
at Mono	0.1%		
at Stereo	0.15%		

MW Tuner Section

Frequency range	510 – 1605kHz	Image rejection	55dB
Sensitivity	280μV/m	IF rejection	64dB
Signal-to-noise ratio	46dB	Aerial	External ferrite bar aeri

General

Power requirements	AC: 115/220V, 50Hz
Power consumption	580W
Dimensions	21-11/32" W x 7-3/8" H x 16-9/16" D (540 x 186 x 420 mm)
Weight	Approx. 40 lbs. 13 ozs. (18.5kg)

* Specifications are subject to change without notice.

MODIFICATION NOTICE

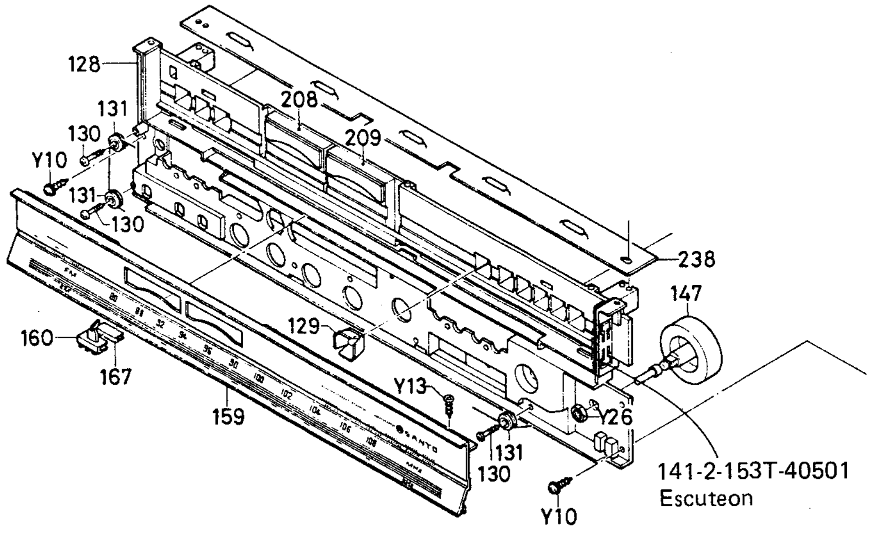
STEREO RECEIVER

JCX 2600 (USA)
JCX 2600
JCX 2600RK (SCAN)

Date Sep. 20. 1978 Issued by

The following corrections should be made in the SERVICE MANUALS and PARTS (PRICE) LIST.

		Section	Key No.	Part No.	Description	Q'ty	Remark	Reason
1	From						Add	D
	To			141-2-153T-40501	Escutcheon (Ref. no.128 right side)	1		
2	From							
	To							
3	From							
	To							


128
208
131
130
209
Y10
131
130
238
147
129
160
167
159
Y13
Y26
131
130
Y10
141-2-153T-40501
Escuteon

INTERCHANGEABLE NOT INTERCHANGEABLE	Serial No. Chassis No.	Effective from
Q'ty of initial production before modification.	Identification of modified unit.	

REASON FOR MODIFICATION
A ..... Standardization
B ..... Change of materials
C ..... Improvement of reliability
D ..... Improvement of performance
E ..... Miss print
F ..... Miss register
G .....

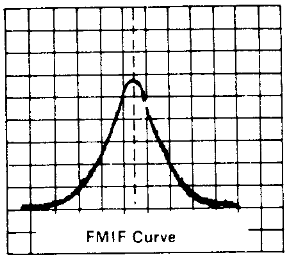
Printed in Japan 8000

SANYO ELECTRIC TRADING CO., LTD.
OSAKA, JAPAN

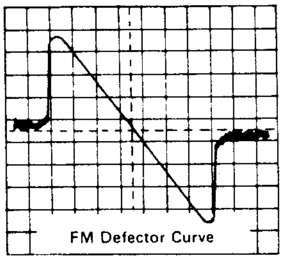
WM- 3571

FM IF ADJUSTMENT

1. V curve adjustment
   1) Connect TP-3 (HOT) and TP-4 (GROUND) to the output terminal of the sweep generator, and TP-5 (H) and TP-17 (G) to the input terminal.
   2) Connect a resistance load of about 10 to 50 K-ohms to the input of the sweep generator and disconnect the tuning meter leadwires from the circuit board.
   3) Cut off ceramic capacitor C261 (0.022μF) at one end.
   4) Make adjustment while keeping the output from the sweep generator at the low level (where noise appears on the waveform).
   5) While watching the sweep waveform, adjust the T201 until the sweep waveform presents the pattern as in Fig. 1.



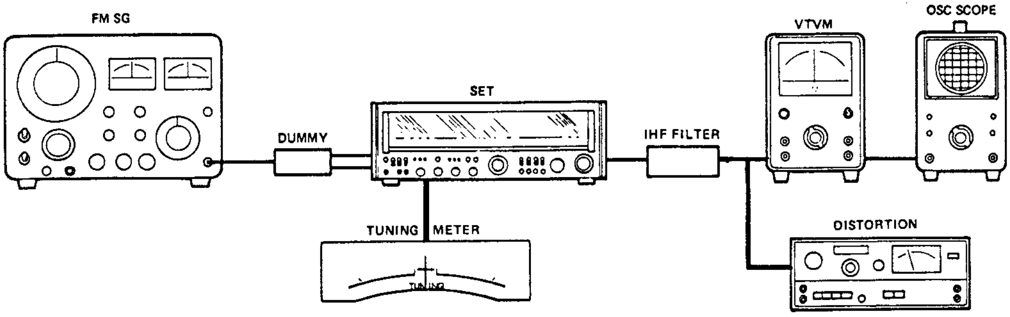
2. S curve adjustment
   1) Connect TP-3 (H) and TP-6 (E) to the output the sweep generator. Connect TP201 (H) and TP104 (E) to its input.
      NOTE: It is necessary to connect a capacitor (1μF/16V) to the input of the sweep generator (H) for cutting DC current.
   2) Adjust the T202 until the S curve presents the pattern as in Fig. 2. Avoid turning the T203 unless absolutely necessary.
      *TP-4 is a shield plate, TP-5 is a R215 (15 K-ohm) and TP-17 is a shield case of T203.



CENTER ADJUSTMENT OF TUNING METER

Set FM SG as follows: modulation frequency 1 KHz, frequency deviation 75 KHz DIV. (100% modulation).
Connect a 300 ohm balanced dummy to the 300 ohm terminal of the external antenna and a filter to TP-9 or TP-10 (H) and TP-11 (G).

1) Set the tuning dial of the unit to 98 MHz (where no Broadcasting signal is coming in).
2) While keeping the FM SG output level to less than −20 dB , adjust the T202 until the tuning meter needle stands at the center point.
3) Apply 60 dB (1 mV) to the 300 ohm terminal of the external antenna and adjust the tuning dial so that the tuning meter needle stands at the center point.
4) Reduce the distortion factor to a minimum by turning the T203.
5) Repeat steps 2), 3) and 4).
6) Turn the core of T201 only slightly until the distortion factor becomes minimal.
7) Set the FM SG output level to 0. Confirm tuning meter needle stands at the center point. If needle is not at center point, repeat from step 2).
8) Set the FM SG output level to the same level as item 3). Conform the distortion factor is minimum when the tuning meter needle is at center point.
   NOTE: Use Hum and Sub-carrier Filter to obtain accurate distortion factor.



FM TRACKING ADJUSTMENT

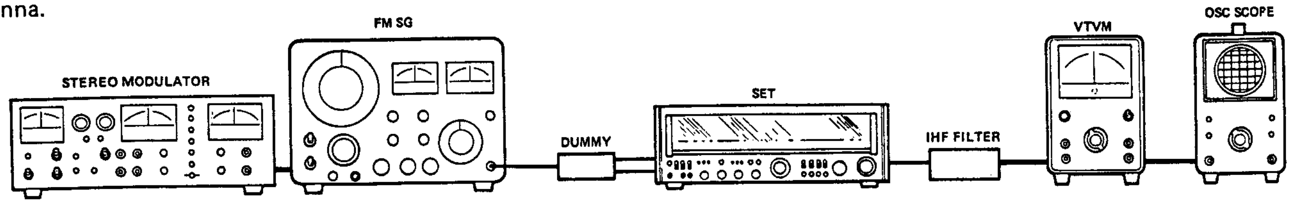
Set FM SG as follows: modulation frequency 1 KHz, frequency deviation 75 KHz DIV. (100% modulation). Connect VTVM to TP-9 or TP-10 (H) and TP-11 (G).
Flip the MODE switch of the unit to "MONO".

1) Make LOW TRACKING adjustment by means of L101, L102 and L103. Use 90 MHz FM signal for this purpose.
2) Make HIGH TRACKING adjustment by means of CT-1, CT-2 and CT-3. Use 106 MHz FM signal for this purpose.
3) Make complete TRACKING adjustment by repeating steps (1) and (2).
   *When properly adjusted, the distortion factor of the output from the unit is reduced to a minimum, provided that the distortion factor of the SG output is about 3%.

19 KHz PILOT CANCELER ADJUSTMENT

Set the frequency of FM SG to 98 MHz and the pilot signal of the stereo modulator to a modulation degree of 9%. Connect a filter to TP-6 or TP-7 (H) and TP-18 (G).

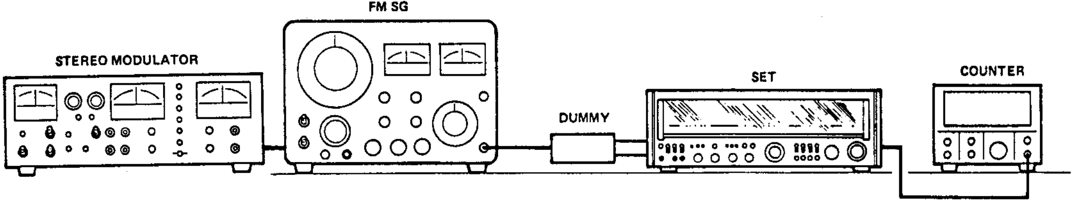
1) Set the tuning dial of the unit to 98 MHz.
2) Apply 60 dB (1 mV) to 300 ohm terminal of external antenna.
3) Turn R305 (SVR) until the leakage of 19 KHz becomes minimum.
   NOTE: Use 19 KHz band-pass filter.



FM VCO ADJUSTMENT

Set the frequency of FM SG to 98 MHz (where no broadcasting signal is coming in), the muting switch of the unit to ON, the pilot signal of the stereo modulation to a modulation degree of 9% and mode switch to MONO. Connect a frequency counter to TP-8 (H) and TP-11 (G).

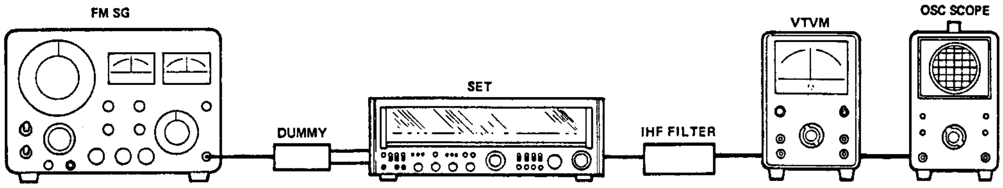
1) Increase the output level of FM SG until the stereo pilot lamp of the unit glows. Then, keep the glowing of the stereo pilot lamp for more than 10 seconds.
2) Adjust R309 (SVR) until the frequency counter reading becomes 76 KHz ±76 Hz immediately after cutting off the SG output (viz. after the stereo pilot lamp has gone out).
   *Do not make this adjustment immediately after setting to ON the power switch of the unit.
   *For this adjustment, use a frequency counter relatively high in input impedance.



FM MUTING LEVEL ADJUSTMENT

Set FM SG as follows: modulation frequency 1 KHz. frequency deviation 75 KHz DIV. (100% modulation). Then, set the muting switch of the unit to ON. Connect a filter to TP-9 or TP-10 (H) and TP-11 (G).

1) Set FM SG to 98 MHz and tune the unit to that frequency.
2) Apply 16 dB to the 300 ohm terminal of external antenna.
3) Turn R217 (SVR) and set it at the position where the VTVM needle stops swinging or the waveform on the oscilloscope becomes very small.
   *When the muting function is ON, the waveform decreases in size, and weak signals and noise are cut off.

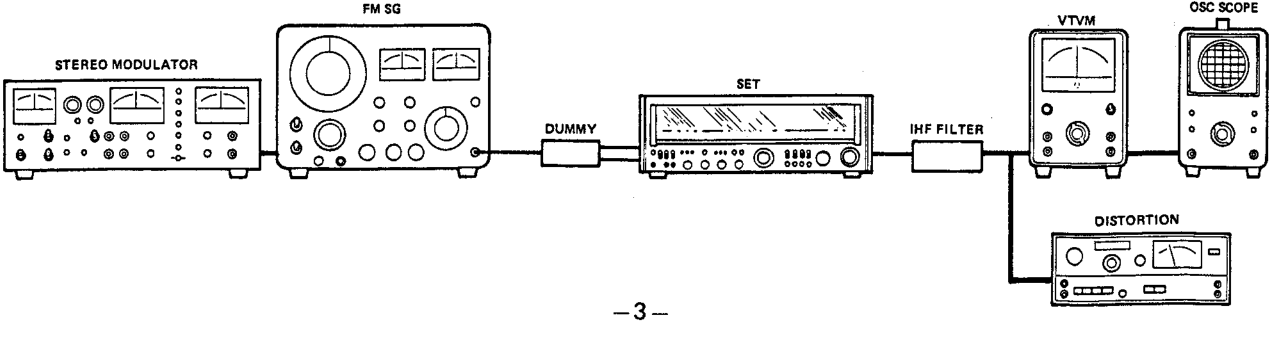


SEPARATION ADJUSTMENT

Set FM SG as follows: modulation frequency 1 KHz, frequency 98 MHz. Set the pilot signal of the stereo modulator to a modulation degree of 9%. PL + L + R = 75 KHz DIV. (9% + 91%)

Select the "STEREO" mode by the mode switch of the unit. Connect a filter to TP-9 or TP-10 (H) and TP-11 (G).

1) Set the input to the unit (i.e. voltage at the 300 ohm terminal of the external antenna) to 60 dB (This corresponds to 66 dB – 1.995 mV in terms of FM SG output).
2) Generator L-R signals by the stereo modulator and tune the unit completely to their level. (In this state, the distortion factor is reduced to a minimum.)
3) Switch the stereo modulator from R to L channels. Reduce signel output leakage of each channel to a minimum by adjusting R301 (SVR).
   *When making this adjustment, use a lowpass filter and eliminate 19 KHz and 38 KHz carrier components.
   *Make this adjustment after VCO and 19 KHz PILOT CANCELER adjustment.

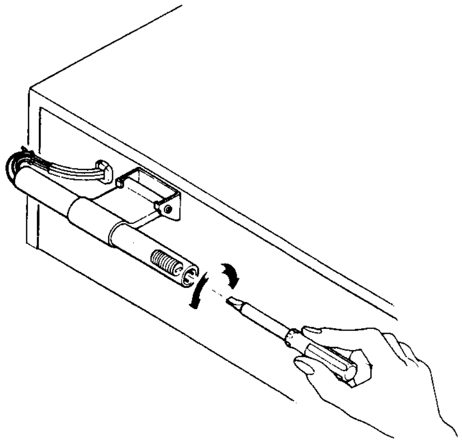


MW TRACKING ADJUSTMENT

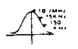
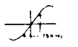
Connect VTVM to TP-12 (H) and TP-13 (G).

1) Set the frequency of AM SG to 600 KHz and the tuning dial of the unit to 600 KHz.
2) Set the position of BAR ANTENNA as requested and dress the leadwires of BAR ANTENNA before making adjustment.
3) Turn the core of L105 (BAR ANTENNA) until the output of the unit becomes maximum.
4) Set the frequency of AM SG to 1400 KHz and the tuning dial of the unit to 1400 KHz.
5) Turn CT-5 (VC TRIMMER) until the output of the unit becomes maximum.
6) Repeat the above steps from 1). until the output of the unit becomes maximum at both 600 KHz and 1400 KHz.

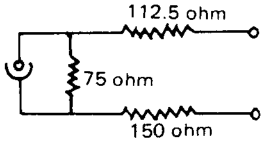
NOTE: Use plastic screw driver for this adjustment.



FM ALIGNMENT

Step	Adjusting Circuit	Connections		SG frequency	Position of tuning dial	Adjustment	VTVM Oscilloscope
		Input	Output				
1	I.F.	Connect sweep generator to FM TP-3 (H) & TP-4 (G) . . . shield plate	Connect oscilloscope to test point TP-5 (H), TP-17 (G)	10.7 MHz (0% modulation)	Near max. capacitance of tuning gang with no station signal.	T201	
2	Ratio Det.		Connect oscilloscope to test point TP-16 (H), TP-17 (G)			T202, T203	
3	OSC.	Connect FM SG. to FM ANT. Terminals or TP-1 (H) & TP-2 (G)	Connect VTVM to TP-9 TP-10 (H) & TP-11 (G)	87.0 MHz (400 Hz 30% modulation)	Low end of dial scale	L104	Max.
4				109.0 MHz (400 Hz 30% modulation)	High end of dial scale	CT-4	
5	ANT.	Connect FM SG. to FM ANT. Terminals or TP-1 (H) & TP-2 (G)	Connect VTVM to TP-9 TP-10 (H) & TP-11 (G)	90.0 MHz (400 Hz 30% modulation)	90.0 MHz on dial scale	L101, L102, L103	Max.
6				106.0 MHz (400 Hz 30% modulation)	106.0 MHz on dial scale	CT-1, CT-2, CT-3	
7	Repeat adjustments						

PREPARE:
1. Set the dial pointer to very left line of dial scale.
2. Connect sweep generator, FM SG. VTVM and oscilloscope. FM ANT input impedance is 300 ohm.
3. Use a screwdriver with plastic grip for all adjustments.
4. Use a 300 ohm balanced dummy load.

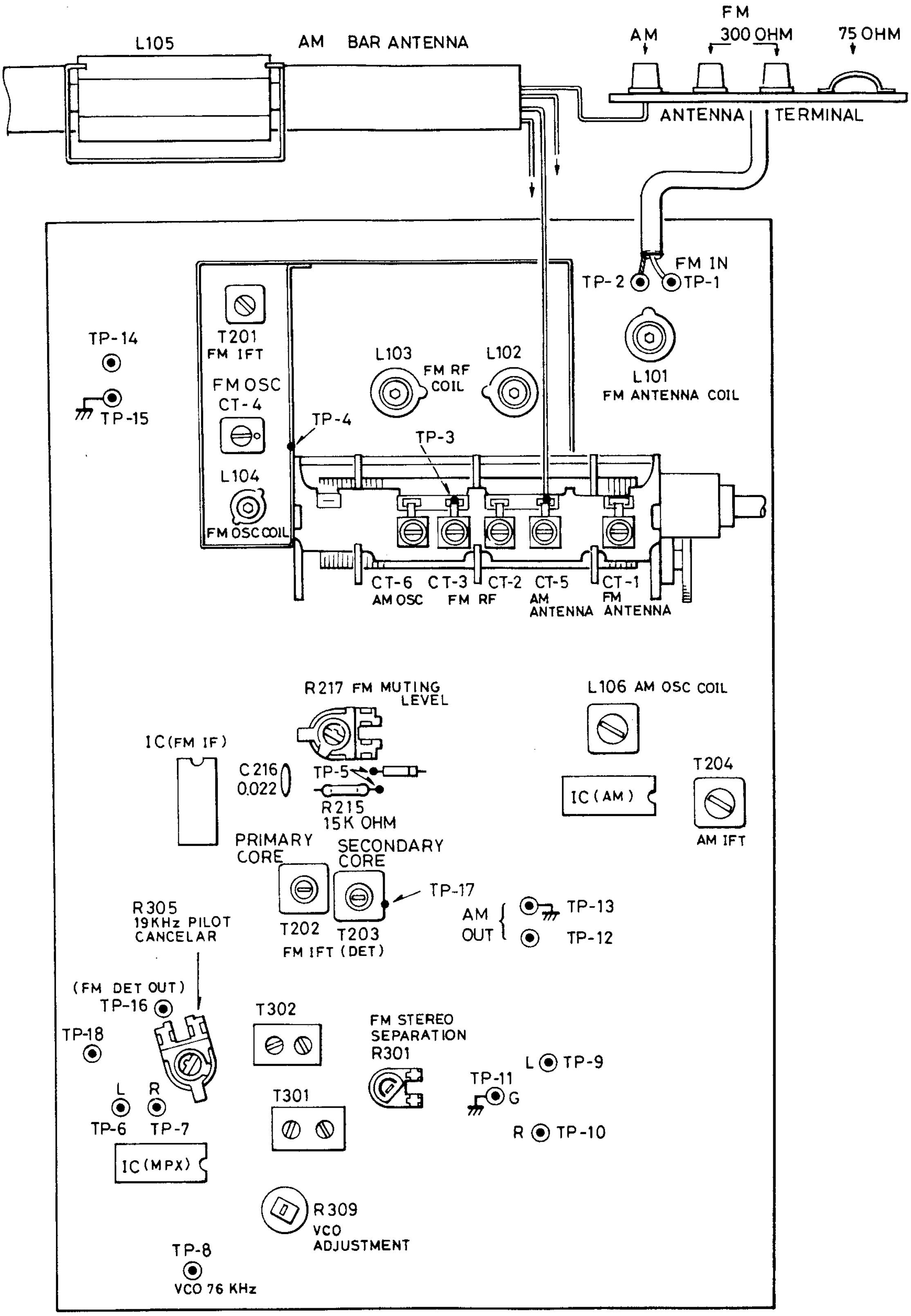


MW ALIGNMENT

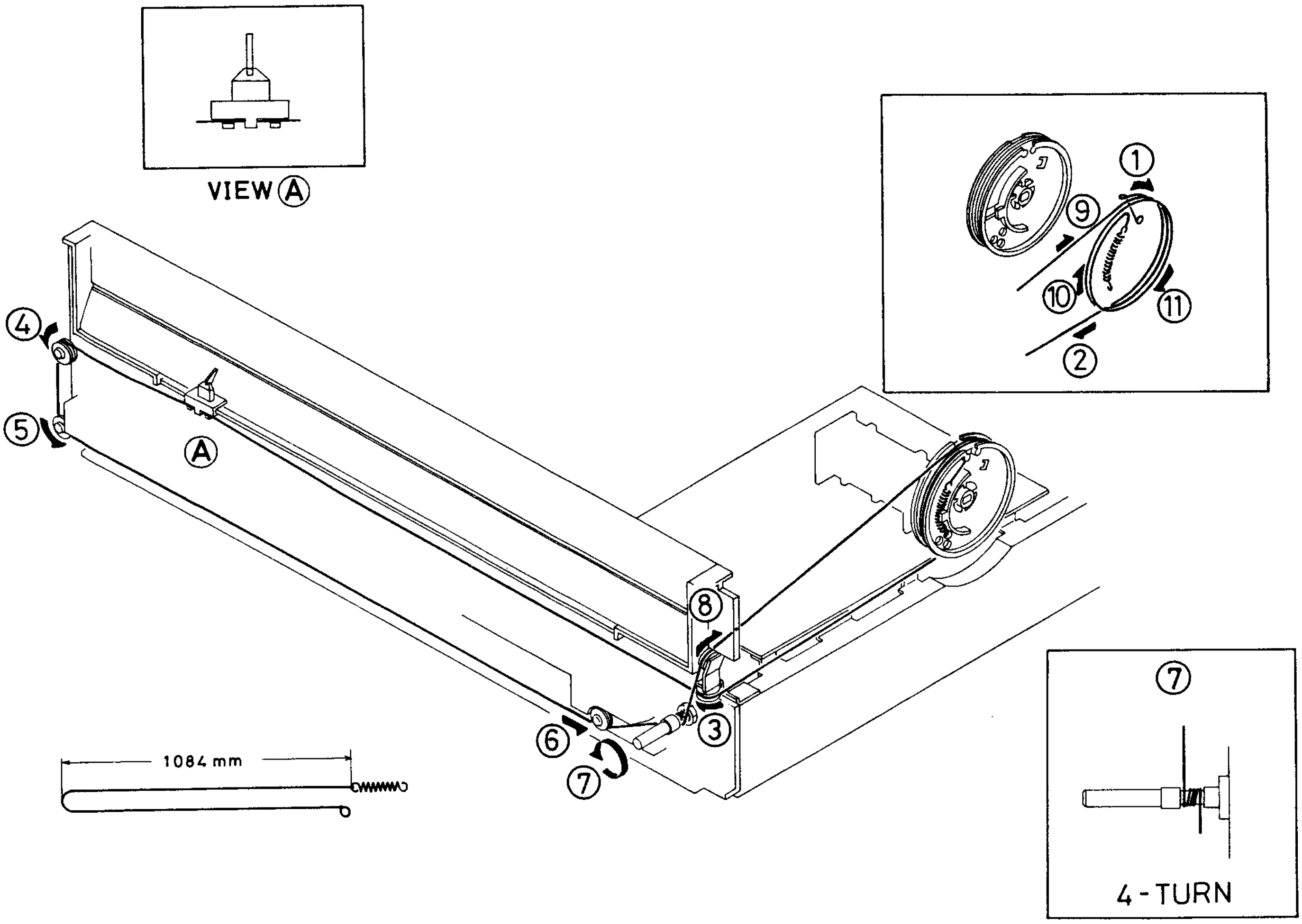
Step	Adjusting Circuit	Connections		SG frequency	Position of tuning dial	Adjustment	VTVM Oscilloscope
		Input	Output				
1	I.F.T.	Connect AM SG to test loop-antenna	Connect oscilloscope to TP-12 (H) & TP-13 (G)	455 KHz (400 Hz 30% modulation)	Low end of dial scale. With no station signal.	T204	Max.
2	OSC.	Connect AM SG to test loop-antenna	Connect VTVM to TP-12 (H) & TP-13 (G)	505 KHz (400 Hz 30% modulation)	Low end of dial scale	L106	Max.
3				1700 KHz (400 Hz 30% modulation)	High end of dial scale	CT-6	
4	ANT.	Connect AM SG to test loop-antenna	Connect VTVM to TP-12 (H) & TP-13 (G)	600 KHz (400 Hz 30% modulation)	600 KHz on dial scale	L105	Max.
5				1400 KHz (400 Hz 30% modulation)	1400 KHz on dial scale	CT-5	
6	Repeat adjustments.						

PREPARE:
1. Set the dial pointer to very left line on dial scale.
2. Use a screwdriver with plastic grip for all adjustments.
3. Selector switch to "MW".
4. Connect sweep generator, AM SG, VTVM and oscilloscope.

PARTS LOCATION


L105
AM BAR ANTENNA
AM
FM
300 OHM
75 OHM
ANTENNA TERMINAL
FM IN
TP-2
TP-1
T201
FM IFT
TP-14
TP-15
FM OSC
CT-4
TP-4
L103
FM RF
COIL
L102
L101
FM ANTENNA COIL
TP-3
L104
FM OSC COIL
CT-6
AM OSC
CT-3
FM RF
CT-2
CT-5
AM
ANTENNA
CT-1
FM
ANTENNA
R217 FM MUTING LEVEL
L106 AM OSC COIL
IC (FM IF)
C216
0.022
TP-5
R215
15K OHM
IC (AM)
T204
AM IFT
PRIMARY CORE
SECONDARY CORE
TP-17
R305
19KHz PILOT
CANCELAR
T202
T203
FM IFT (DET)
AM OUT
TP-13
TP-12
(FM DET OUT)
TP-16
TP-18
T302
FM STEREO
SEPARATION
R301
L
TP-9
TP-11
G
L
R
TP-6
TP-7
T301
R
TP-10
IC (MPX)
R309
VCO
ADJUSTMENT
TP-8
VCO 76 KHz

DIAL CORD STRINGING


VIEW Ⓐ
④
⑤
Ⓐ
⑧
③
⑥
⑦
1084 mm
①
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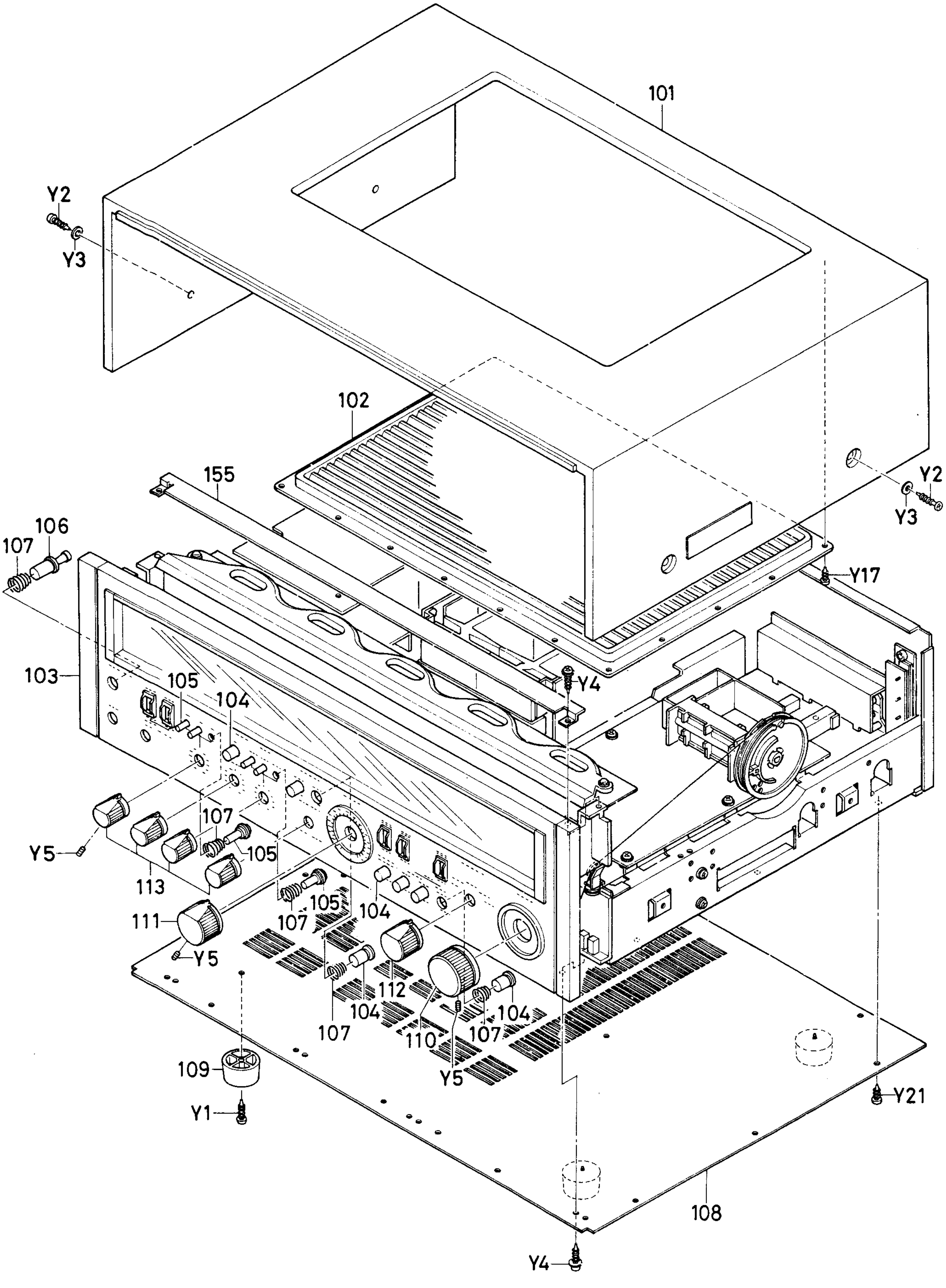
⑩
⑪
②
⑦
4-TURN

CABINET EXPLODED VIEW


101
Y2
Y3
102
155
Y2
Y3
106
107
Y17
103
Y4
105
104
107
Y5
105
113
105
111
107
104
Y5
112
104
107
110
107
104
Y5
109
Y1
Y21
108
Y4

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
PACKING			
	141-6-132T-92100	Individual Carton	1
	141-6-316T-96300	Pad	2
	141-6-316T-96400	Pad	2
	141-6-230T-25350	Inner Polyethylene Bag, Inst. B	1
	123-6-453R-00100	Inspection Sheet	2
	141-6-231T-07000	Inner Polyethylene Bag, Set	1
	141-6-230T-10250	Inner Polyethylene Bag, Power Cord	1
	141-6-230T-06100	Inner Polyethylene Bag, Spanner	1
ACCESSARY			
	141-6-410T-15800	Instruction Book	1
	141-2-419T-00200	Spanner, Rotary Knob	1
	4-245T-00171	Antenna, AM	1
	141-6-415T-22900	Notice	1
	141-4-415T-23000	Notice	1
	141-4-415T-23500	Notice	1
CABINET			
101	141-0-111T-34901	Cabinet Assy	1
102	141-2-242T-02100	Lattice Assy	1
103	141-0-122T-22802	Front Panel Assy	1
104	141-0-161T-50700	Push Button Assy (141-9-161T-09400)	7
105	141-0-161T-50800	Push Button Assy (141-9-161T-03500)	6
106	141-0-161T-50701	Push Button Assy Power Switch (141-9-161T-03600)	1
107	141-2-855T-21500	Spring Coil	14
108	141-0-125T-14001	Bottom Lid Assy	1
109	141-0-174T-06900	Stand Assy (141-9-174T-00700)	4
110	141-2-163T-48700	Rotary Knob, Tuning	1
111	141-0-163T-48800	Rotary Knob Assy, Volume (141-9-163T-05200)	1
112	141-0-163T-39600	Rotary Knob Assy, Function	1
113	141-0-163T-43300	Rotary Knob Assy, Tone (141-9-163T-02800)	4
114	141-6-472T-14900	Caution Label	2
CHASSIS			
121	141-2-126T-26600	Back Lid Assy	1
122	141-2-315T-16000	Reinforcement	1
123	141-2-315T-16100	Reinforcement, Center	1
124	141-2-315T-16200	Reinforcement, Right	1
125	141-2-315T-16300	Reinforcement	1
126	141-2-315T-15600	Reinforcement, Front	1
127	141-2-310T-10800	Bracket	1
128	141-0-214T-02400	Bracket Flame Assy	1
129	141-2-329T-05600	Refrector	1
130	141-2-421T-20900	Special Screw, Pulley	5
131	141-2-661T-71300	Pulley, Dial	5
132	141-2-310T-10300	Bracket, Pulley	1
133	141-2-310T-09700	Bracket, Pre Amp	1
134	141-2-310T-09800	Bracket, Main Amp	2
135	141-2-310T-09900	Bracket, Heatsink	2
136	141-2-210T-07200	Bracket, Shaft	1
137	141-2-368T-14300	Heat Shink, Power TR	2
138	141-2-310T-10000	Bracket, SP Socket	1
139	141-2-365T-39300	Bracket, Switch SP	1
140	141-2-365T-39400	Bracket, Switch Lever	1
141	141-2-253T-10900	Joint, Tape Monitor	3
142	141-2-753T-33600	Shaft, Tape Monitor	3
143	141-2-457T-23600	Special Washer	3
144	141-0-753T-36000	Shaft Assy, Function Switch	1
145	141-2-310T-11800	Bracket	1
146	141-2-253T-11700	Joint	1
147	141-0-566T-07200	Tuning Shaft Assy	1
148	141-2-464T-24000	Fixer	2
149	141-2-464T-20700	Fixer	2
150	141-2-382T-09800	Terminal	2
151	141-2-464T-20671	Fixer	15
152	141-2-464T-20672	Fixer	5
153	141-2-472T-01201	Lug	7
154	141-2-329T-05400	Refrector, Dial	1
155	141-2-328T-05600	Shield Light, Dial	1
156	141-2-447T-16800	Cushion, Pre Amp	1
157	141-2-464T-26000	Fixer	1
158	141-2-472T-01001	Lug	1
159	141-0-146T-16602	Dial Scale Assy	1
160	141-0-511T-13000	Pointer Assy	1
161	141-2-538T-08700	Drum	1
162	141-2-855T-14800	Spring Coil	1
163	141-2-340T-00200	Rope	1
164	141-0-162T-13900	Lever Knob Assy	5
165	141-2-135T-53300	Cover	5
166	141-2-310T-11000	Bracket	1
167	141-2-246T-12900	Sheet	1
168	141-2-310T-11100	Bracket	2
169	141-2-464T-08700	Fixer	1
170	141-2-310T-10500	Bracket	1
171	141-2-369T-05400	Bracket Coil	1
172	141-2-243T-02700	Base	2
173	141-2-464T-20600	Fixer	2
174	141-2-457T-23000	Special Washer	2
175	141-2-411T-08100	Plate Nut, Voltage Select	1
176	141-2-464T-14400	Fixer	1
177	141-2-310T-16800	Bracket, Fuse	1
178	141-2-327T-17900	Insulator	1
SCREW MOUNTING			
Y1		Binding Head Tapping Screw 4 x 18 mm	4
Y2		Binding Head Screw 4 x 14 mm	4
Y3		Washer 4 x 13 x 1.2 mm	4
Y4		Washer Head Tapping Screw 3 x 12 mm	6
Y5		Headless Screw with Hexagon Hole 3 x 4 mm	6
Y6		Tapping Screw 3 x 6 mm	3
Y7		Tapping Screw 4 x 8 mm	4
Y8		Hexagon Nut 5 mm	4
Y9		Hexagon Nut 10 mm	1
Y10		Washer Head Tapping Screw 3 x 10 mm	84
Y11		Binding Head Tapping Screw 3 x 10 mm	25
Y12		External Toothlock Washer 3 x 6.5 x 0.45 mm	6
Y13		Tapping Screw 3 x 12 mm	4
Y14		Washer Head Tapping Screw 3 x 16 mm	6
Y15		Binding Head Screw 3 x 10 mm	2
Y16		Spring Washer 5 x 9.2 x 1.3 mm	4
Y17		Round Head Wood Screw 3.1 x 10 mm	10
Y18		Pan Head Screw 3 x 50 mm	1
Y19		Spring Washer 3 x 5.9 x 0.7 mm	1
Y20		Binding Head Screw 3 x 8 mm	4
Y21		Tapping Screw 3 x 8 mm	13
Y22		Washer 3 mm	2
Y23		Hexagon Nut 3 mm	2
Y24		Washer Head Tapping Screw 3 x 8 mm	2
Y25		Pan Head Screw with Spring Washer 3 x 8 mm	14
Y26		Hexagon Nut 9 x 0.75 mm	1
Y27		Pan Head Screw with Spring Washer 3 x 18 mm	8
ELECTRICAL PARTS			
201	4-251T-88200	Power Trans	1
202	4-243T-81500	Power Cord	1
203	141-2-382T-09700	Terminal	2

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
204	4-236T-13300	Plug	2
205	4-235T-39671	Socket, Pre Out Power In	1
206	141-2-382T-07000	Terminal	2
208	4-511T-08200	Meter, Signal	1
209	4-511T-08300	Meter, Tuning	1
210	4-257T-24104	Ant Coil Assy (L105)	1
211		Transistor 2SD425 R or O (Q711, 811)	2
212		Transistor 2SB555 R or O (Q712, 812)	2
213	4-235T-52200	Socket, Power TR	4
214	4-235T-55600	Socket, Power TR	1
215	4-235T-55671	Socket, Power TR	1
216	4-235T-55700	Socket, Power TR	1
217	4-235T-55771	Socket, Power TR	1
218	4-235T-54600	Socket 4 Pin, Meter	1
219	4-235T-43400	Socket 4 Pin	1
220	4-235T-51900	Socket 5 Pin	1
221	4-235T-51800	Socket 4 Pin	1
222	4-235T-52400	Socket 6 Pin	1
223	141-2-368T-11000	Heat Sink	1
224	4-231T-37683	Switch, Voltage Selector	1
225	123-2-472R-01000	Lug	1
226 (C132)		Ceramic 220PF ±10% 50V	1
MAIN AMP LEFT CHANNEL PCB ASSY			
224	141-4-230T-49002	P.C. Board Assy, Main Amp Left Channel	1
	4-236T-12971	Plug 4P	2
SVR701, 702	4-222T-62373	Semifixed Variable Resistor 1K	2
L701	4-265T-05800	VHF Coil	1
Q709		Transistor 2SC1624 Y or O	1
Q710		Transistor 2SA814 Y or O	1
Q704,705		Transistor 2SC1628 Y	2
Q706		Transistor 2SA818 Y	1
Q701,702, 703		Transistor 2SA942 BL	3
Q707		Transistor 2SC1175 E	1
Q708		Transistor 2SA659 E	1
D701,702, 704,705, 706,707, 708		Diode DS442X	7
D703		Varystor STV-3H GR	1
	4-209T-01173	Pozistor	1
		CAPACITORS	
C703,704		Electrolytic, 100μF 63V	2
C707		Electrolytic, 220μF 16V	1
C701		Electrolytic, 1μF 50V	1
C708		Mylar, 0.1μF 50V ±20%	1
C711		Mylar, 0.047μF 50V ±20%	1
C709,710		Mylar, 0.015μF 50V ±20%	2
C702		Mylar, 470PF 50V ±10%	1
C706		Ceramic, 100PF 500V ±10%	1
C705		Ceramic, 33PF 500V ±10%	1
C712	4-223T-06400	Capacitor 0.047μF 150V	1
		RESISTORS	
R724,725		Cement, 0.33ohm ±10% 5W	2
R727		Metal, 10ohm ±5% 1W	1
R726		Metal, 5.6ohm ±5% 1W	1
R707,712, 718,719		Metal, 150ohm ±5% 1/2W	4
R713,714		Metal, 100ohm ±5% 1/2W	2
R728,729		Metal, 56ohm ±5% 1/2W	2
R720,721		Metal, 10ohm ±5% 1/2W	2
R702		Carbon, 470Kohm ±5% 1/4W	1
R703,715		Carbon, 47Kohm ±5% 1/4W	2
R709		Carbon, 27Kohm ±5% 1/4W	1
R705,706		Carbon, 8.2Kohm ±5% 1/4W	2

Ref. No.	Part No.	Description	Q'ty
R708		Carbon, 3.3Kohm ±5% 1/4W	1
R711		Carbon, 2.2Kohm ±5% 1/4W	1
R710		Carbon, 1.8Kohm ±5% 1/4W	1
R723		Carbon, 1Kohm ±5% 1/4W	1
R701,722		Carbon, 1Kohm ±5% 1/4W	2
R704		Carbon, 330ohm ±5% 1/4W	1
R716		Carbon, 18Kohm ±5% 1/4W	1
R730		Carbon, 150ohm ±5% 1/4W	1
R731		Carbon, 150ohm ±5% 1/4W	1
MAIN AMP RIGHT CHANNEL PCB ASSY			
225	141-4-230T-49102	P.C. Board Assy, Main Amp Right Channel	1
	4-236T-12971	Plug 4P	2
SVR801, 802	4-222T-62373	Semifixed Variable Resistor 1K	2
L801	4-265T-05800	VHF Coil	1
Q809		Transistor 2SC1624 Y or O	1
Q810		Transistor 2SA814 Y or O	1
Q804,805		Transistor 2SC1628 Y	2
Q806		Transistor 2SA818 Y	1
Q801,802, 803		Transistor 2SA942 BL	3
Q807		Transistor 2SC1175 E	1
Q808		Transistor 2SA659 E	1
D801,802, 804,805, 806,807, 808		Diode DS442X	7
D803		Varystor STV-3H GR	1
	4-209T-01173	Pozistor	1
		CAPACITORS	
C803,804		Electrolytic, 100μF 63V	2
C807		Electrolytic, 220μF 16V	1
C801		Electrolytic, 1μF 50V	1
C808		Mylar, 0.1μF 50V ±20%	1
C811		Mylar, 0.047μF 50V ±20%	1
C809,810		Mylar, 0.015μF 50V ±20%	2
C802		Mylar, 470PF 50V ±10%	1
C806		Ceramic, 100PF 500V ±10%	1
C805		Ceramic, 33PF 500V ±10%	1
C812	4-223T-06400	Capacitor, 0.047μF 150V	1
		RESISTORS	
R824,825		Cement, 0.33ohm ±10% 5W	2
R827		Metal, 10ohm ±5% 1W	1
R826		Metal, 5.6ohm ±5% 1W	1
R807,812, 818,819		Metal, 150ohm ±5% 1/2W	4
R813,814		Metal, 100ohm ±5% 1/2W	2
R828,829		Metal, 56ohm ±5% 1/2W	2
R820,821		Metal, 10ohm ±5% 1/2W	2
R802		Carbon, 470Kohm ±5% 1/4W	1
R803,815		Carbon, 47Kohm ±5% 1/4W	2
R809		Carbon, 27Kohm ±5% 1/4W	1
R805,806		Carbon, 8.2Kohm ±5% 1/4W	2
R808		Carbon, 3.3Kohm ±5% 1/4W	1
R811		Carbon, 2.2Kohm ±5% 1/4W	1
R810		Carbon, 1.8Kohm ±5% 1/4W	1
R823		Carbon, 1Kohm ±5% 1/4W	1
R801,822		Carbon, 1Kohm ±5% 1/4W	2
R804		Carbon, 330ohm ±5% 1/4W	1
R816		Carbon, 18Kohm ±5% 1/4W	1
R830		Carbon, 150ohm ±5% 1/4W	1
R831		Carbon, 150ohm ±5% 1/4W	1

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
TONE AMP PCB ASSY			
226	141-4-230T-49200	PCB Assy, Tone Amp (140-9-230T-93200)	1
	4-222T-62200	Variable Resistor	3
Q552,553, 652,653		Transistor 2SC1570 G	4
Q551,651		Transistor 2SA929 G	2
		CAPACITORS	
C554,654		Electrolytic, 100µF 10V	2
C566,567		Electrolytic, 220µF 25V	2
C556,564, 656,664		Electrolytic, 100µF 16V	4
C557,562, 565,657, 662,665		Electrolytic, 4.7µF 25V	6
C551,651		Electrolytic, 1.0µF 50V (Nonpolar)	2
C558,559, 658,659		Mylar, 0.022µF 50V ±5%	4
C560,561, 660,661		Mylar, 0.0047µF 50V ±5%	4
C552,553, 652,653		Ceramic, 47PF 50V ±10%	4
C555,563, 655,653		Ceramic, 12PF 50V ±10%	4
		RESISTORS	
R570,670		Carbon, 270Kohm ±5% 1/4W	2
R559,659		Carbon, 220Kohm ±5% 1/4W	2
R553,573, 653,673		Carbon, 100Kohm ±5% 1/4W	4
R554,654		Carbon, 56Kohm ±5% 1/4W	2
R563,663		Carbon, 27Kohm ±5% 1/4W	2
R562,662		Carbon, 22Kohm ±5% 1/4W	2
R560,561, 660,661		Carbon, 15Kohm ±5% 1/4W	4
R556,656		Carbon, 12Kohm ±5% 1/4W	2
R566,567, 666,667		Carbon, 6.8Kohm ±5% 1/4W	4
R564,565, 571,664, 665,671		Carbon, 5.6Kohm ±5% 1/4W	6
R557,657		Carbon, 4.7Kohm ±5% 1/4W	2
R572,672		Carbon, 3.9Kohm ±5% 1/4W	2
R558,658		Carbon, 2.7Kohm ±5% 1/4W	2
R555,655		Carbon, 1.8Kohm ±5% 1/4W	2
R568,668		Carbon, 1.2Kohm ±5% 1/4W	2
R551,651		Carbon, 560ohm ±5% 1/4W	2
R569,669		Carbon, 100Kohm ±5% 1/4W	2
R552,652		Carbon, 220Kohm ±5% 1/4W	2
TONE SWITCH PCB ASSY			
227	141-4-230T-49301	PCB Assy, Tone Switch	1
S11,12	4-231T-73100	Push Switch	1
S9,10	4-231T-73200	Push Switch	1
S13,14	4-231T-73300	Push Switch	1
S7	4-231T-73900	Push Switch	1
Q581,681		Transistor 2SC1570 G	2
Q582,682		Transistor 2SC945 P	2
		CAPACITORS	
C592,692		Electrolytic, 4.7µF 25V	2
C591,691		Electrolytic, 1.0µF 50V	2
C589,590, 689,690		Mylar, 0.1µF 50V ±5%	4
C584,586, 684,686		Mylar, 0.068µF 50 ±5%	4
C585,587, 685,687		Mylar, 0.022µF 50V ±5%	4
C593,693		Mylar, 0.0082µF 50V ±5%	2
C580,581, 582,680, 681,682		Mylar, 0.0015µF 50V ±5%	6
C583,683		Mylar, 0.0015µF 50V ±5%	2
C588,688		Mylar, 470PF 50V ±10%	2
C595,695		Mylar, 0.01µF 50V ±10%	2
		RESISTORS	
R699		Carbon, 47Kohm ±5% 1/4W	1
R581,582, 583,681, 682,683		Carbon, 1Mohm ±5% 1/4W	6
R584,585, 586,684, 685,686		Carbon, 1Mohm ±5% 1/4W	6
R596,696		Carbon, 1Mohm ±5% 1/4W	2
R589,689		Carbon, 270Kohm ±5% 1/4W	2
R591,592, 691,692		Carbon, 220Kohm ±5% 1/4W	4
R594,694		Carbon, 100Kohm ±5% 1/4W	2
R588,688		Carbon, 39Kohm ±5% 1/4W	2
R593,693		Carbon, 4.7Kohm ±5% 1/4W	2
R590,595, 690,695		Carbon, 2.2Kohm ±5% 1/4W	4
R587,687		Carbon, 1Kohm ±5% 1/4W	2
R597,697		Carbon, 5.6Kohm ±5% 1/4W	2
R598,698, 599		Carbon, 220Kohm ±5% 1/4W	3
VOLUME & BALANCE PCB ASSY			
228	141-4-230T-49401	PCB Assy, Volume & Balance	1
	4-222T-62400	Variable Resistor, Volume	1
	4-222T-56600	Variable Resistor, Balance	1
		CAPACITORS	
C541,641		Ceramic, 220PF 50V ±10%	2
MUTING SWITCH PCB ASSY			
229	141-4-230T-49501	PCB Assy, Muting Switch	1
	4-231T-73400	Special Switch	4
		RESISTORS	
R542,642		Carbon, 47Kohm ±5% 1/4W	2
R541,641		Carbon, 5.6Kohm ±5% 1/4W	2
LOUDNESS SWITCH PCB ASSY			
230	141-4-230T-49600	PCB Assy, Loudness Switch (140-9-230T-93600)	1
S	4-231T-74000	Push Switch	1
		CAPACITOR	
C542,642		Mylar, 0.082µF 50V ±5%	2
		RESISTORS	
R543,643		Carbon, 4.7Kohm ±5% 1/4W	2
R544,644		Carbon, 1Mohm ±5% 1/4W	2

RTS LIST

Ref. No.	Part No.	Description	Q'ty

EADPHONE PCB ASSY

Ref. No.	Part No.	Description	Q'ty
1	141-4-230T-49800	PCB Assy, Headphone (141-9-230T-93800)	1
	4-235T-36771	Socket	1

EAKER SWITCH PCB ASSY

Ref. No.	Part No.	Description	Q'ty
2	141-4-230T-49902	PCB Assy, Speaker Switch	1
	4-231T-73400	Special Switch	2
401,402		Metal Resistor, 220ohm ±5% 1W	2

OWER SWITCH PCB ASSY

Ref. No.	Part No.	Description	Q'ty
33	141-4-230T-73501	PCB Assy, Power Switch	1
	4-231T-76472	Push Switch	1
	4-223T-04700	Capacitor	1
	141-2-381T-04200	Bracket, Fuse	4
	4-234T-02171	Fuse 630mA	2

PEAKER TERMINAL, MUTING PCB ASSY

Ref. No.	Part No.	Description	Q'ty
34	141-4-230T-50201	P.C. Board Assy, Speaker Terminal, Muting	1
	4-232T-05200 4-232T-05271	Relay } or Relay	1
	4-237T-07071	Terminal Board	2
413		Transistor 2SD438 E	1
411,412, 414		Transistor 2SC945 P	3
420,421		Diode 1N4002 or 1N4003	2
411,412, 413,414, 415,416		Diode DS442X or 1S2472	6
417,418, 422,423, 424,425, 426		Diode DS442X or 1S2472	7
419		Diode YZ047	1
		CAPACITORS	
411		Electrolytic, 100µF 25V Nonpola	1
414,415		Electrolytic, 0.47µF 50V Nonpola	2
412		Electrolytic, 47µF 25V	1
413		Electrolytic, 1µF 50V	1
		RESISTORS	
414,417		Carbon, 220Kohm ±5% 1/4W	2
424		Carbon, 100Kohm ±5% 1/4W	1
419		Carbon, 47Kohm ±5% 1/4W	1
415,416, 425		Carbon, 33Kohm ±5% 1/4W	3
426		Carbon, 27Kohm ±5% 1/4W	1
411,412, 420,421, 423,427		Carbon, 22Kohm ±5% 1/4W	6
422		Carbon, 1.8Kohm ±10% 1/4W	1
413,418		Carbon, 1Kohm ±5% 1/4W	2

HONO AMP PCB ASSY

Ref. No.	Part No.	Description	Q'ty
35	141-4-230T-50371	PCB Assy, Phono Amp	1
1	4-231T-74100	Rotary Switch	1
S2,3,4	4-231T-73800	Push Switch	1
	141-2-322T-42300	Shield Plate	1
	4-235T-45700	Socket, Phono 1, 2, AUX	1
	4-235T-48400	Socket, Tape 1, 2	2
	4-236T-10273	Plug 6 Pin	1
D501,601		Diode 1N4001	2
IC501,601		IC HA 1457	2
		CAPACITORS	
C510,511		Electrolytic, 470µF 25V	2
C501,601		Electrolytic, 4.7µF 25V	2
C509,609		Electrolytic, 1µF 50V (Non Polar)	2
C503,603		Electrolytic, 47µF 16V	2
C506,606		Styrol, 6800PF 50V ±2%	2
C507,607		Styrol, 1800PF 50V ±2%	2
C508,608		Styrol, 130PF 50V ±5%	2
C504,604		Ceramic, 100PF 50V ±10%	2
C502,602		Ceramic, 47PF 50V ±10%	2
C505,605		Ceramic, 22PF 50V ±10%	2
C512,513, 514,515		Ceramic, 0.01µF 50V +80−20%	4
		RESISTORS	
R505,605		Metal, 510Kohm ±1% 1/4W	2
R506,606		Metal, 39Kohm ±1% 1/4W	2
R503,603		Carbon, 100Kohm ±5% 1/4W	2
R502,602		Carbon, 2.2Kohm ±5% 1/4W	2
R501,508, 601,608		Carbon, 100Kohm ±5% 1/4W	4
R511,611		Carbon, 3.3Kohm ±5% 1/4W	2
R509,510 609,610		Carbon, 2.2Kohm ±5% 1/4W	4
R504,604		Carbon, 820ohm ±5% 1/4W	2
R507,607		Carbon, 560ohm ±5% 1/4W	2

DIN PCB ASSY

Ref. No.	Part No.	Description	Q'ty
236	141-4-230T-50501	PCB Assy, DIN	1
	4-235T-53200	Socket	1
		RESISTORS	
R512,612		Carbon, 270Kohm ±5% 1/4W	2

FUNCTION INDICATOR PCB ASSY

Ref. No.	Part No.	Description	Q'ty
237	141-4-230T-50771	PCB Assy, Function Indicator	1
	4-612T-08100	Lamp, 6.3V 65mA Function	5
	4-612T-08200	Lamp, 6V 30mA Stereo	1

DIAL LIGHT PCB ASSY

Ref. No.	Part No.	Description	Q'ty
238	141-4-230T-50801	PCB Assy, Dial Light	1
	4-612T-07371	Lamp	5
	4-237T-00171	Terminal Board	7
	4-234T-03671	Fuse 2A	1
	141-2-381T-04200	Bracket, Fuse	2
	141-6-476T-11200	Indication Label	1

FUSE PCB ASSY

Ref. No.	Part No.	Description	Q'ty
239	141-4-230T-73471	PCB Assy, Fuse	1
	141-4-281T-04200	Bracket Fuse	4
	4-234T-06171	Fuse, 2.5A	1
	4-234T-06471	Fuse, 5A	1
	4-237T-00171	Terminal Board	4

PARTS LIST

DC POWER SUPPLY PCB ASSY

Ref. No.	Part No.	Description	Q'ty
240	141-4-230T-51971	P.C. Board Assy, Power Supply	1
	4-236T-13472	Plug 3P	1
	4-236T-13479	Plug 10P	1
Q901		Transistor 2SD386 E	1
Q902		Transistor 2SD333 E	1
Q903		Transistor 2SC1175 E	1
Q904		Transistor 2SD438 E	1
Q905		Transistor 2SB514 E	1
Q906		Transistor 2SA659 E	1
Q907		Transistor 2SB560 E	1
D902		Diode W02	1
D903		Diode XZ135	1
D904		Diode XZ132	1
		CAPACITORS	
C911,912		Electrolytic, 470μF 50V	2
C913,921, 922		Electrolytic, 100μF 35V	3
C916,917		Electrolytic, 47μF 35V	2
C915		Electrolytic, 1000μF 16V	1
C914		Electrolytic, 220μF 16V	1
C918		Electrolytic, 47μF 16V	1
C923,924		Electrolytic, 4.7μF 35V	2
C907,908, 909,910		Ceramic, 0.01μF 50V +100–0%	4
C919,920		Ceramic, 0.001μF 50V +80–20%	2
		RESISTORS	
R906		Metal, 100ohm ±5% 3W	1
R921,923		Metal, 180ohm ±5% 1/2W	2
R920,922		Metal, 220ohm ±5% 1/2W	2
R909		Metal, 56ohm ±5% 1/2W	1
R908		Metal, 10ohm ±5% 1/2W	1
R917,919		Carbon, 27Kohm ±5% 1/4W	2
R910,911		Carbon, 22Kohm ±5% 1/4W	2
R916		Carbon, 18Kohm ±5% 1/4W	1
R915		Carbon, 15Kohm ±5% 1/4W	1
R907,912, 913,914		Carbon, 2.2Kohm ±5% 1/4W	4
R918		Carbon, 1.2Kohm ±5% 1/4W	1

MIC AMP PCB ASSY

Ref. No.	Part No.	Description	Q'ty
241	141-4-230T-49771	P.C. Board, Mic Amp	1
	141-2-322T-42200	Shield Plate	1
	4-235T-36700	Socket	1
Q522		Transistor 2SC1570 G	1
Q521		Transistor 2SA929 G	1
		CAPACITORS	
C528,529		Electrolytic, 33μF 25V	2
C524,525		Electrolytic, 22μF 16V	2
C521		Electrolytic, 1μF 50V	1
C526		Electrolytic, 1.0μF 50V Nonpolar	1
C523		Ceramic, 47PF 50V ±5%	1
C522		Ceramic, 470PF 50V ±10%	1
C527		Ceramic, 12PF 50V ±10%	1
		RESISTORS	
R523		Carbon, 220Kohm ±5% 1/4W	1
R524		Carbon, 100Kohm ±5% 1/4W	1
R530		Carbon, 100Kohm ±5% 1/4W	1
R525		Carbon, 56Kohm ±5% 1/4W	1
R526		Carbon, 12Kohm ±5% 1/4W	1
R521		Carbon, 10Kohm ±5% 1/4W	1
R528		Carbon, 4.7Kohm ±5% 1/4W	1
R529		Carbon, 2.7Kohm ±5% 1/4W	1
R522		Carbon, 2.2Kohm ±5% 1/4W	1
R527		Carbon, 470ohm ±5% 1/4W	1

TUNER PCB ASSY

Ref. No.	Part No.	Description	Q'ty
242	141-4-230T-48706	PCB Assy, Tuner	1
L101	4-265T-03700	VHF Coil	1
L102	4-265T-50300	VHF Coil	1
L103	4-265T-50400	VHF Coil	1
L104	4-265T-03900	VHF Coil	1
T201	4-256T-05140	I.F.T	1
T202	4-256T-10100	I.F.T	1
T203	4-256T-10200	I.F.T	1
T204	4-256T-10930	I.F.T	1
L201	4-253T-10600	Filter	1
L106	4-258T-15540	OSC Coil	1
	4-224T-11100	Variable Capacitor	1
L107,L202	4-253T-08600	Hi-frequ Choke	2
T301,T302	4-255T-01400	MPX Coil	2
R217	4-222T-39476	Semifixed Variable Resistor 20K-B	1
R301	4-222T-39577	Semifixed Variable Resistor 50K	1
R309	4-222T-62080	Semifixed Variable Resistor 3.3K	1
	4-236T-10271	Plug, Meter	1
	4-236T-10271	Plug, Switch	1
	141-2-322T-41900	Shield Plate	1
	141-2-322T-42000	Shield Plate	1
CF1,2,3	4-256T-81000 4-256T-81071 4-256T-81072 4-256T-81073 4-256T-81074	IF Filter IF Filter IF Filter } or IF Filter IF Filter	3
R305	4-222T-39478	Semifixed Variable Resistor 100K-B	1
L203,204	4-253T-08600	Hi-frequ Choke	2
	4-236T-10271	Plug, Function Switch	1
	4-236T-10272	Plug, Meter Switch	1
CF4	4-256T-80971	IF Filter	1
	141-2-323T-00500	Shield Box, L101	1
CT4	4-224T-08800	Trimmer	1
Q101		Transistor 2SK59 GR	1
Q102		Transistor 2SC535 B	1
Q103		Transistor 2SC930 E CONV	1
Q301		Transistor 2SC536 F AUD or GAUD	1
Q302		Transistor 2SC536 G AUD	1
Q361		Transistor 2SC945 P	1
Q362,363		Transistor 2SC945 P or Q	2
Q360		Transistor 2SC945 P	1
Q351		Transistor 2SC945 P	1
Q358, 357		Transistor 2SD655 E	2
Q306,308		Transistor 2SA702 F ALF	2
Q305,359, 304		Transistor 2SC536 G AUD	3
Q307,309		Transistor 2SC1571 G AUD	2
Q352,353,		Transistor 2SC536 G AUD or FAUD	2
Q354,356		Transistor 2SC536 G AUD	2
Q355		Transistor 2SA608 E	1
Q364		Transistor 2SC536 G AUD	1
D102,103		Diode 1S2473	2
D101		Diode 1S2473 or DS442X	1
D201		Diode 1S2473 or DS442X	1
D104,202		Diode 1S188 FM	2
D203		Diode MA26	1
D364,351		Diode 1S2473 or DS442X	2
D356,357		Diode 1S2473 or DS442X	2
D362		Diode 1S2473 or DS442X	1
D359,360, 361		Diode 1S2473 or DS442X	3

RTS LIST

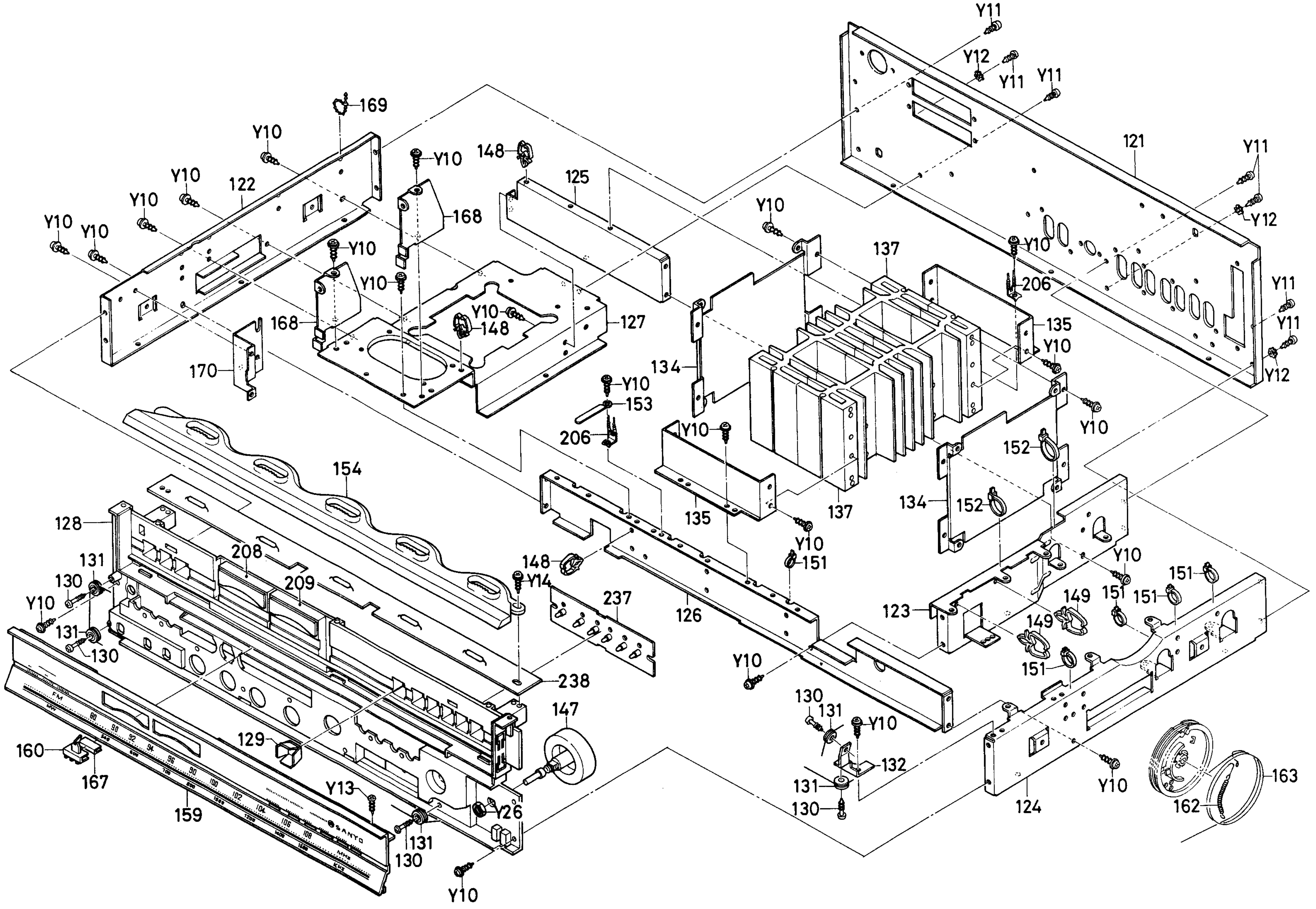
Ref. No.	Part No.	Description	Q'ty
63,204		Diode 1S2473 or DS442X	2
54,353		Diode 1S2472	2
55		Diode 1S188 FM	1
05		Diode 1S2473	1
58		Diode 1S2473 or DS442X	1
65		Diode 1S2473 or DS442X	1
1		IC HA-1138	1
2		IC LA-1222	1
3		IC HV-1137W	1
4		IC HA-11223	1
		CAPACITORS	
130		Ceramic, 1PF 50V ±0.25PF	1
110		Ceramic, 2PF 50V ±0.25PF	1
106		Ceramic, 7PF 50V ±0.25PF	1
113		Ceramic, 6PF 50V ±0.25PF	1
101		Ceramic, 12PF 50V ±10%	1
104		Ceramic, 15PF 50V ±10%	1
105		Ceramic, 18PF 50V ±10%	1
126		Ceramic, 10PF 50V ±10%	1
112		Ceramic, 20PF 50V ±5%	1
115		Ceramic, 15PF 50V ±5%	1
114		Ceramic, 33PF 50V ±10%	1
209		Ceramic, 33PF 50V ±10%	1
223		Ceramic, 0.01μF 50V +80−20%	1
225		Ceramic, 56PF 50V ±5%	1
111		Ceramic, 100PF 50V ±10%	1
227		Ceramic, 220PF 50V ±10%	1
102		Ceramic, 0.001μF 50V ±10%	1
103,131		Ceramic, 0.001μF 50V ±10%	2
109,117, 116		Ceramic, 0.01μF 50V +80−20%	3
108,123, 122		Ceramic, 0.01μF 50V +80−20%	3
119,201, 202,203, 204,205		Ceramic, 0.01μF 50V +80−20%	6
221,107		Ceramic, 0.01μF 50V +80−20%	2
118,124, 216		Ceramic, 0.022μF 50V +80−20%	3
127,206, 207		Ceramic, 0.047μF 50V +80−20%	3
208,212, 214		Ceramic, 0.047μF 50V +80−20%	3
215		Ceramic, 0.047μF 50V +80−20%	1
218,222		Ceramic, 0.01μF 50V +80−20%	2
217,224		Ceramic, 0.01μF 50V +80−20%	2
129		Ceramic, 0.001μF 50V ±10%	1
304		Stylol, 1000PF 125V ±5%	1
125		Styrol, 300PF 125V ±5%	1
120		Mylar, 0.01μF 50V ±20%	1
128,309		Mylar, 0.01μF 50V ±20%	2
229		Mylar, 0.027μF 50V ±20%	1
228		Mylar, 0.01μF 50V ±20%	1
230		Mylar, 0.068μF 50V ±20%	1
305		Mylar, 0.0022μF 50V ±10%	1
308		Mylar, 0.0015μF 50V ±10%	1
322,332		Mylar, 0.015μF 50V ±5%	2
321,331		Mylar, 0.0022μF 50V ±10%	2
303		Mylar, 0.047μF 50V ±20%	1
314		Electrolvtic, 470μF 16V	1
313		Electrolytic, 220μF 16V	1
213,232		Electrolytic, 100μF 16V	2
121		Electrolytic, 10μF 16V	1
226		Electrolytic, 33μF 10V	1
210,219		Electrolytic, 1μF 50V	2
C220		Electrolytic, 0.47μF 50V	1
C211		Electrolytic, 4.7μF 25V	1
C302		Electrolytic, 2.2μF 50V	1
C310,307		Electrolytic, 3.3μF 25V	2
C323,333		Electrolytic, 0.47μF 50V	2
C306		Al Electrolytic, 0.47μF 10V ±20%	1

Ref. No.	Part No.	Description	Q'ty
C312,311		Al Electrolytic, 0.33μF 10V ±20%	2
C315		Electrolytic, 0.47μF 50V	1
C354		Electrolytic, 0.47μF 50V ±20% (Non Polar)	1
C352		Electrolytic, 100μF 35V	1
C351		Electrolytic, 10μF 35V	1
C355		Electrolytic, 1μF 50V	1
C233		Electrolytic, 47μF 10V	1
C231		Electrolytic, 47μF 10V	1
C356		Electrolytic, 0.47μF 50V ±20% (Non Polar)	1
C357		Electrolytic, 0.47μF 50V	1
C234		Al Electrolytic, 0.1μF 10V	1
		RESISTORS	
R102		Carbon, 10ohm ±5% 1/4W	1
R203		Carbon, 560ohm ±5% 1/4W	1
R113		Carbon, 100ohm ±5% 1/4W	1
R324,334		Carbon, 270ohm ±5% 1/4W	2
R368		Carbon, 270ohm ±5% 1/4W	1
R227		Carbon, 330ohm ±5% 1/4W	1
R202,206		Carbon, 330ohm ±5% 1/4W	2
R205,207		Carbon, 330ohm ±5% 1/4W	2
R210		Carbon, 470ohm ±5% 1/4W	1
R201		Carbon, 330ohm ±5% 1/4W	1
R381		Carbon, 1Kohm ±5% 1/4W	1
R360		Carbon, 1Kohm ±5% 1/4W	1
R342		Carbon, 1Kohm ±5% 1/4W	1
R230		Carbon, 1Kohm ±5% 1/4W	1
R105		Carbon, 1Kohm ±5% 1/4W	1
R306,220		Carbon, 1Kohm ±5% 1/4W	2
R321,331		Carbon, 1.2Kohm ±5% 1/4W	2
R379		Carbon, 1Kohm ±5% 1/4W	1
R204		Carbon, 2.2Kohm ±5% 1/4W	1
R226,213		Carbon, 2.2Kohm ±5% 1/4W	2
R208		Carbon, 2.2Kohm ±5% 1/4W	1
R110,115		Carbon, 2.7Kohm ±5% 1/4W	2
R225		Carbon, 3.3Kohm ±5% 1/4W	1
R311		Carbon, 3.3Kohm ±5% 1/4W	1
R325,335		Carbon, 3.3Kohm ±5% 1/4W	2
R209		Carbon, 3.9Kohm ±5% 1/4W	1
R303,304		Carbon, 3.9Kohm ±5% 1/4W	2
R223		Carbon, 1.8Kohm ±5% 1/4W	1
R320		Carbon, 5.6Kohm ±5% 1/4W	1
R332		Carbon, 5.6Kohm ±5% 1/4W	1
R104		Carbon, 5.6Kohm ±5% 1/4W	1
R343		Carbon, 5.6Kohm ±5% 1/4W	1
R356		Carbon, 8.2Kohm ±5% 1/4W	1
R352		Carbon, 8.2Kohm ±5% 1/4W	1
R231		Carbon, 8.2Kohm ±5% 1/4W	1
R372		Carbon, 10Kohm ±5% 1/4W	1
R373		Carbon, 10Kohm ±5% 1/4W	1
R374		Carbon, 10Kohm ±5% 1/4W	1
R111,308		Carbon, 10Kohm ±5% 1/4W	2
R211		Carbon, 12Kohm ±5% 1/4W	1
R322		Carbon, 5.6Kohm ±5% 1/4W	1
R103,107		Carbon, 150ohm ±5% 1/4W	2
R109,222		Carbon, 150ohm ±5% 1/4W	2
R114		Carbon, 680ohm ±5% 1/4W	1
R330		Carbon, 5.6Kohm ±5% 1/4W	1
R340		Carbon, 270ohm ±5% 1/4W	1
R112		Carbon, 10Kohm ±5% 1/4W	1
R377		Carbon, 47ohm ±5% 1/4W	1
R378		Carbon, 15Kohm ±5% 1/4W	1
R317		Carbon, 22Kohm ±5% 1/4W	1
R233		Carbon, 100Kohm ±5% 1/4W	1
R232		Carbon, 150Kohm ±5% 1/4W	1
R218		Carbon, 12Kohm ±5% 1/4W	1
R361		Carbon, 22Kohm ±5% 1/4W	1
R363		Carbon, 150Kohm ±5% 1/4W	1

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
R108,221, 212		Solid, 56ohm ±10% 1/2W	3
R314,315		Solid, 56ohm ±10% 1/2W	2
R312		Solid, 100ohm ±10% 1/2W	1
R337,327		Carbon, 27Kohm ±5% 1/4W	2
R216		Carbon, 47Kohm ±5% 1/4W	1
R215		Carbon, 15Kohm ±5% 1/4W	1
R354		Carbon, 15Kohm ±5% 1/4W	1
R302		Carbon, 18Kohm ±5% 1/4W	1
R365		Carbon, 22Kohm ±5% 1/4W	1
R366		Carbon, 22Kohm ±5% 1/4W	1
R359		Carbon, 22Kohm ±5% 1/4W	1
R323,333		Carbon, 27Kohm ±5% 1/4W	2
R353		Carbon, 27Kohm ±5% 1/4W	1
R307,369		Carbon, 33Kohm ±5% 1/4W	2
R106,224		Carbon, 39Kohm ±5% 1/4W	2
R101,214		Carbon, 47Kohm ±5% 1/4W	2
R370		Carbon, 47Kohm ±5% 1/4W	1
R357		Carbon, 47Kohm ±5% 1/4W	1
R362		Carbon, 68Kohm ±5% 1/4W	1
R116		Carbon, 56Kohm ±5% 1/4W	1
R341		Carbon, 10Kohm ±5% 1/4W	1
R358		Carbon, 82Kohm ±5% 1/4W	1
R345		Carbon, 82Kohm ±5% 1/4W	1
R375		Carbon, 82Kohm ±5% 1/4W	1
R376		Carbon, 100Kohm ±5% 1/4W	1
R344		Carbon, 100Kohm ±5% 1/4W	1
R336,326		Carbon, 100Kohm ±5% 1/4W	2
R228		Carbon, 100Kohm ±5% 1/4W	1
R229,219		Carbon, 100Kohm ±5% 1/4W	2
R371		Carbon, 150Kohm ±5% 1/4W	1
R310		Carbon, 220Kohm ±5% 1/4W	1
R117		Carbon, 330Kohm ±5% 1/4W	1
R367		Carbon, 39Kohm ±5% 1/4W	1
R355		Carbon, 10ohm ±5% 1/4W	1
R380		Carbon, 22Kohm ±5% 1/4W	1
ANTENNA PCB ASSY			
243	140-4-230T-48800	PCB Assy, Antenna (140-9-230T-81200)	1
T101	4-268T-00100	VHF Coil Trans	1
	141-2-382T-07700	Terminal, Antenna	1
	141-2-464T-08700	Fixer	2
DC POWER SUPPLY (POWER AMP) PCB ASSY			
244	141-4-230T-52071	P.C. Board Assy, DC Power Supply (Power Amp)	1
D901		Diode S5188	1
		CAPACITORS	
C901~904		Ceramic, 0.01μF 50V +80–20%	4
C905,906	4-163T-01301	Capacitor Assy	1
		RESISTORS	
R902,903		Metal, 3.9Kohm ±5% 2W	2
R904,905		Metal, 390ohm ±5% 2W	2

CHASSIS EXPLODED VIEW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Y10
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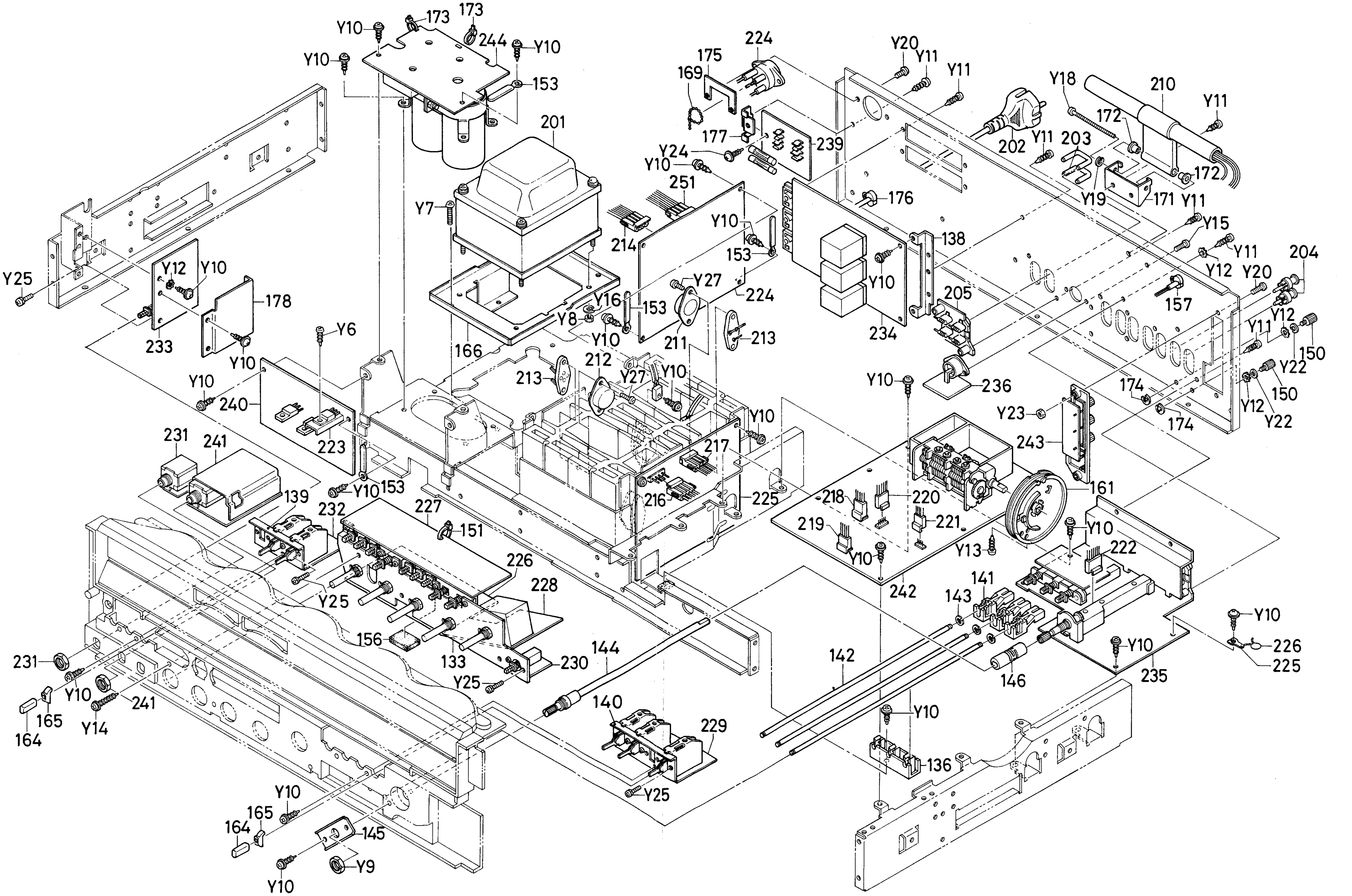
FM
SANYO

CHASSIS EXPLODED VIEW



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133
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Y25
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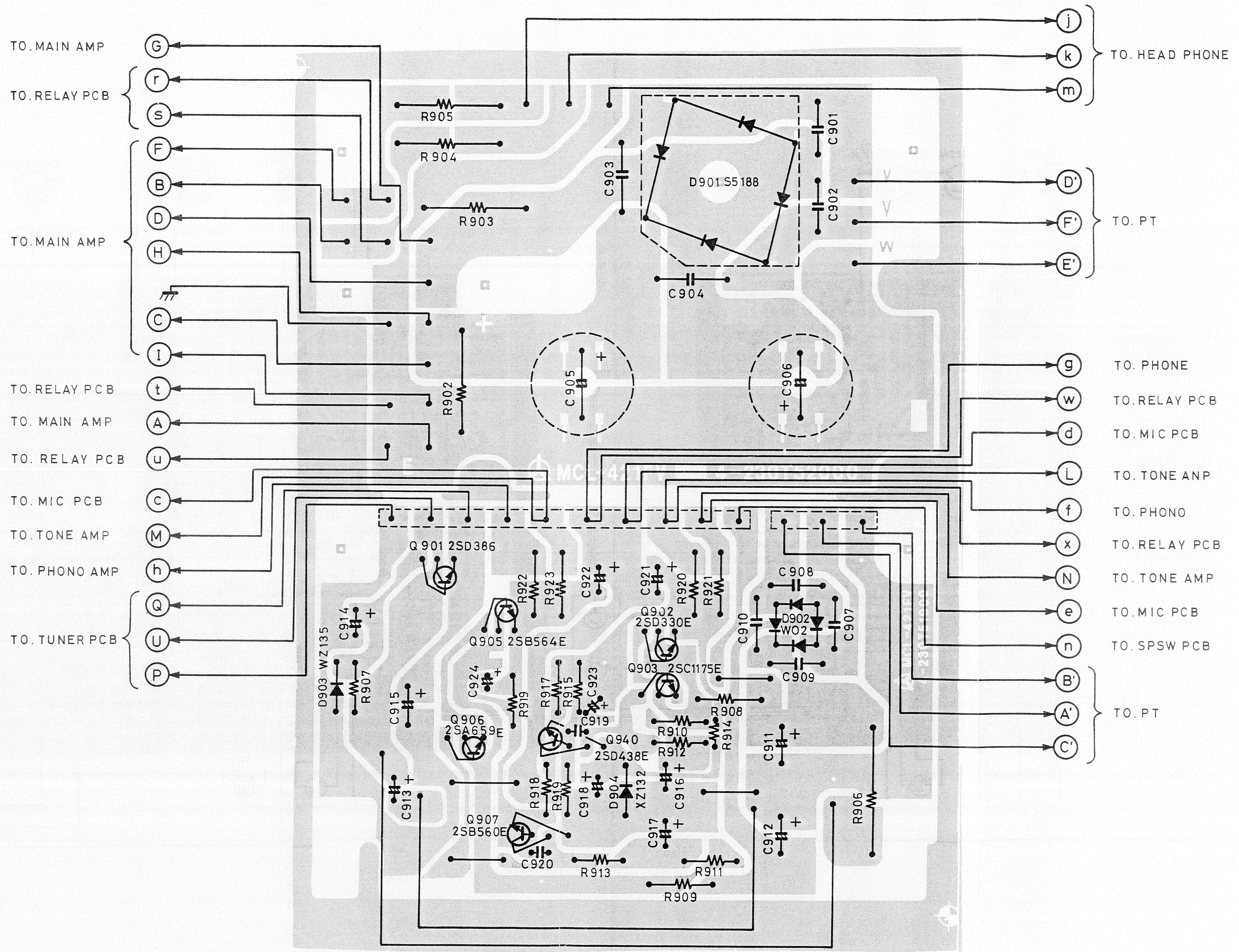
145
Y9
Y10

WIRING DIAGRAM


TO. MAIN AMP
G
TO. RELAY PCB
r
s
F
B
D
H
TO. MAIN AMP
C
I
TO. RELAY PCB
t
TO. MAIN AMP
A
TO. RELAY PCB
u
TO. MIC PCB
c
TO. TONE AMP
M
TO. PHONO AMP
h
Q
U
P
TO. TUNER PCB
j
k
m
TO. HEAD PHONE
D'
F'
E'
TO. PT
g
TO. PHONE
w
TO. RELAY PCB
d
TO. MIC PCB
L
TO. TONE ANP
f
TO. PHONO
x
TO. RELAY PCB
N
TO. TONE AMP
e
TO. MIC PCB
n
TO. SPSW PCB
B'
A'
C'
TO. PT
R905
R904
R903
R902
C903
D901 S5188
C901
C902
C904
C905
C906
Q901 2SD386
Q905 2SB564E
R922
R923
C922
C921
Q902 2SD330E
R920
R921
C908
D902 WO2
C910
C907
C909
Q903 2SC1175E
C914
D903 WZ135
R907
C915
C924
R919
R917
R915
C923
C919
R908
R910
R914
R912
Q906 2SA659E
Q940 2SD438E
C911
C913
R918
R916
C918
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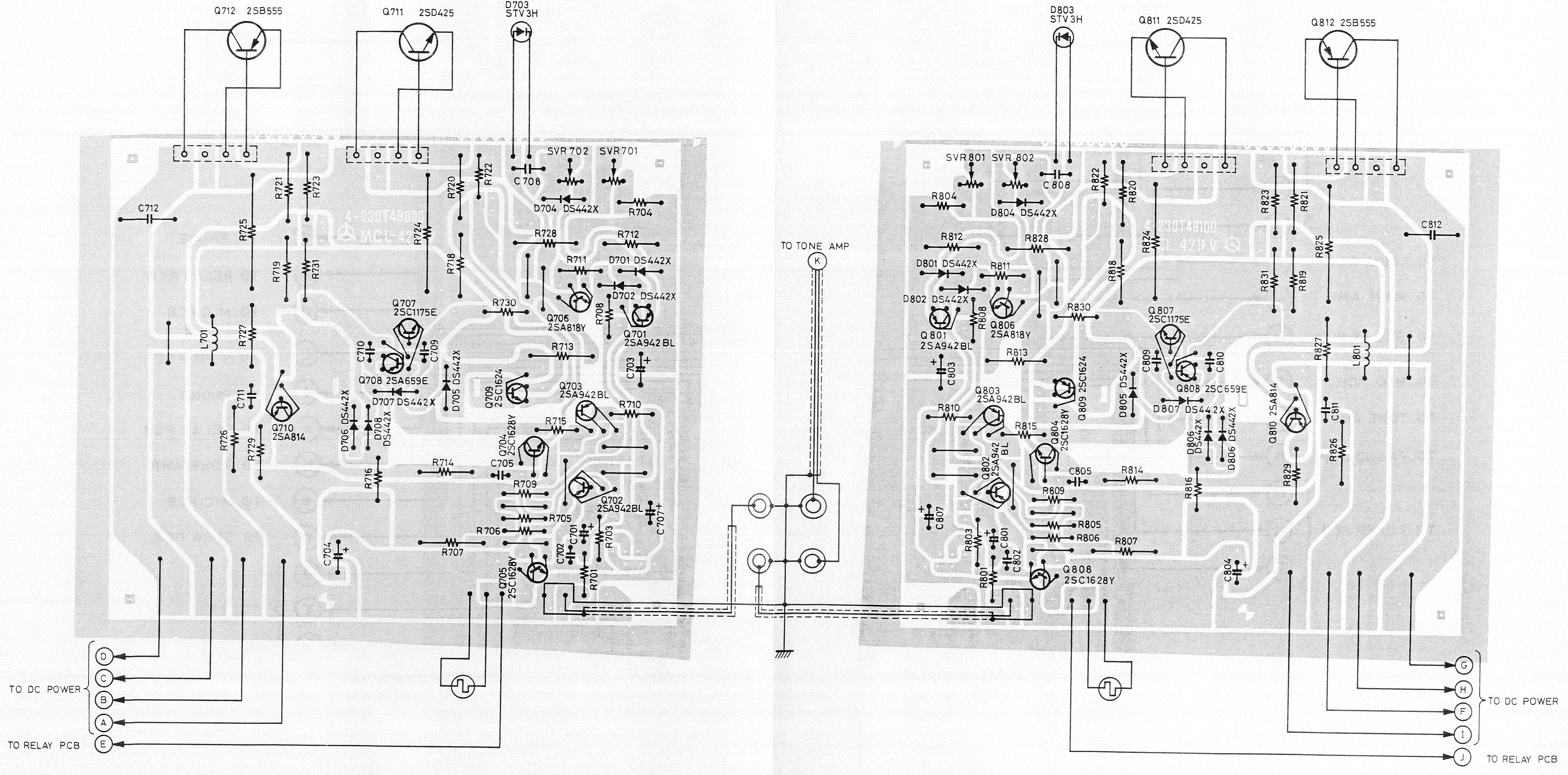
C920
R913
R911
R909

WIRING DIAGRAM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SVR702
SVR701
C708
D704 DS442X
R704
C712
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R720
R722
R725
R724
R728
R712
R711
D701 DS442X
R719
R731
R718
D702 DS442X
Q707 2SC1175E
R730
Q706 2SA818Y
R708
Q701 2SA942 BL
L701
R727
C710
C709
R713
C703
Q708 2SA659E
D705 DS442X
Q709 2SC1624
Q703 2SA942BL
C711
D707 DS442X
R710
Q710 2SA814
D706 DS442X
D708 DS442X
R715
R726
R729
Q704 2SC1628Y
R714
C705
R716
R709
Q702 2SA942BL
C707
R705
R706
C701
R703
R707
C704
C702
R701
Q705 2SC1628Y
TO TONE AMP
K
D803 STV3H
Q811 2SD425
Q812 2SB555
SVR801
SVR802
C808
R822
R820
R804
D804 DS442X
C812
R823
R821
R812
R828
R824
R825
D801 DS442X
R811
R818
R831
R819
D802 DS442X
R808
R830
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Q806 2SA818Y
Q807 2SC1175E
R813
C809
C810
R827
L801
C803
Q809 2SC1624
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Q808 2SC659E
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D807 DS442X
C811
R810
R815
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D806 DS442X
D806 DS442X
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R826
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C804
R801
Q808 2SC1628Y
TO DC POWER
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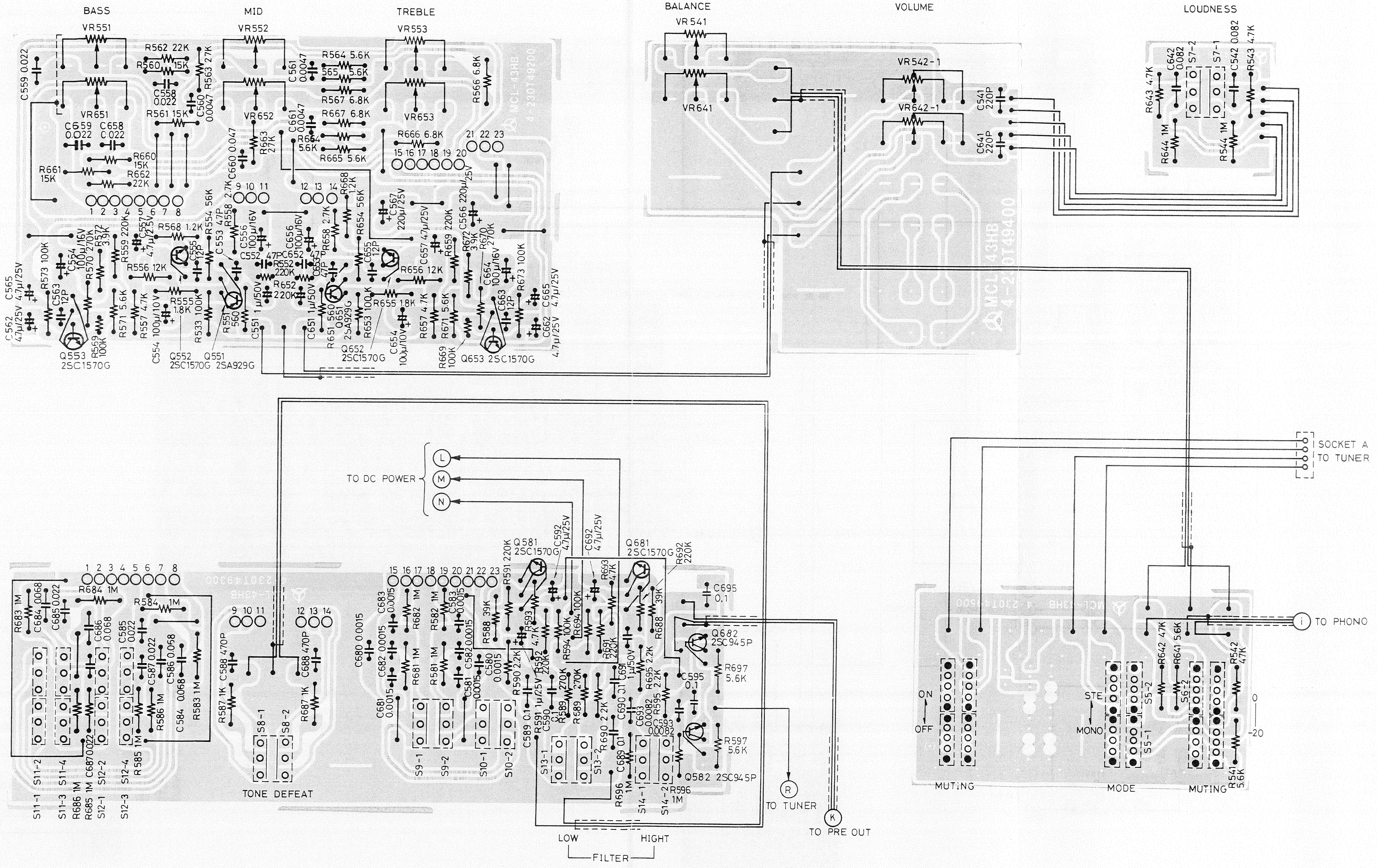
F
I
J
TO DC POWER
TO RELAY PCB

WIRING DIAGRAM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MID
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TREBLE
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VR653
BALANCE
VR541
VR641
VOLUME
VR542-1
VR642-1
LOUDNESS
MCL-43HB
4-230149200
4-230149400
4-230149300
4-230149500
Q553 2SC1570G
Q552 2SC1570G
Q551 2SA929G
Q651 2SA929G
Q652 2SC1570G
Q653 2SC1570G
Q581 2SC1570G
Q681 2SC1570G
Q682 2SC945P
Q582 2SC945P
TO DC POWER
L
M
N
SOCKET A
TO TUNER
TO PHONO
I
R
TO TUNER
K
TO PRE OUT
TONE DEFEAT
S8-1
S8-2
S9-1
S9-2
S10-1
S10-2
S11-1
S11-2
S11-3
S11-4
S12-1
S12-2
S12-3
S12-4
S13-1
S13-2
S14-1
S14-2
LOW
HIGHT
FILTER
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OFF
MUTING
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S5-2
S6-2
S7-1
S7-2
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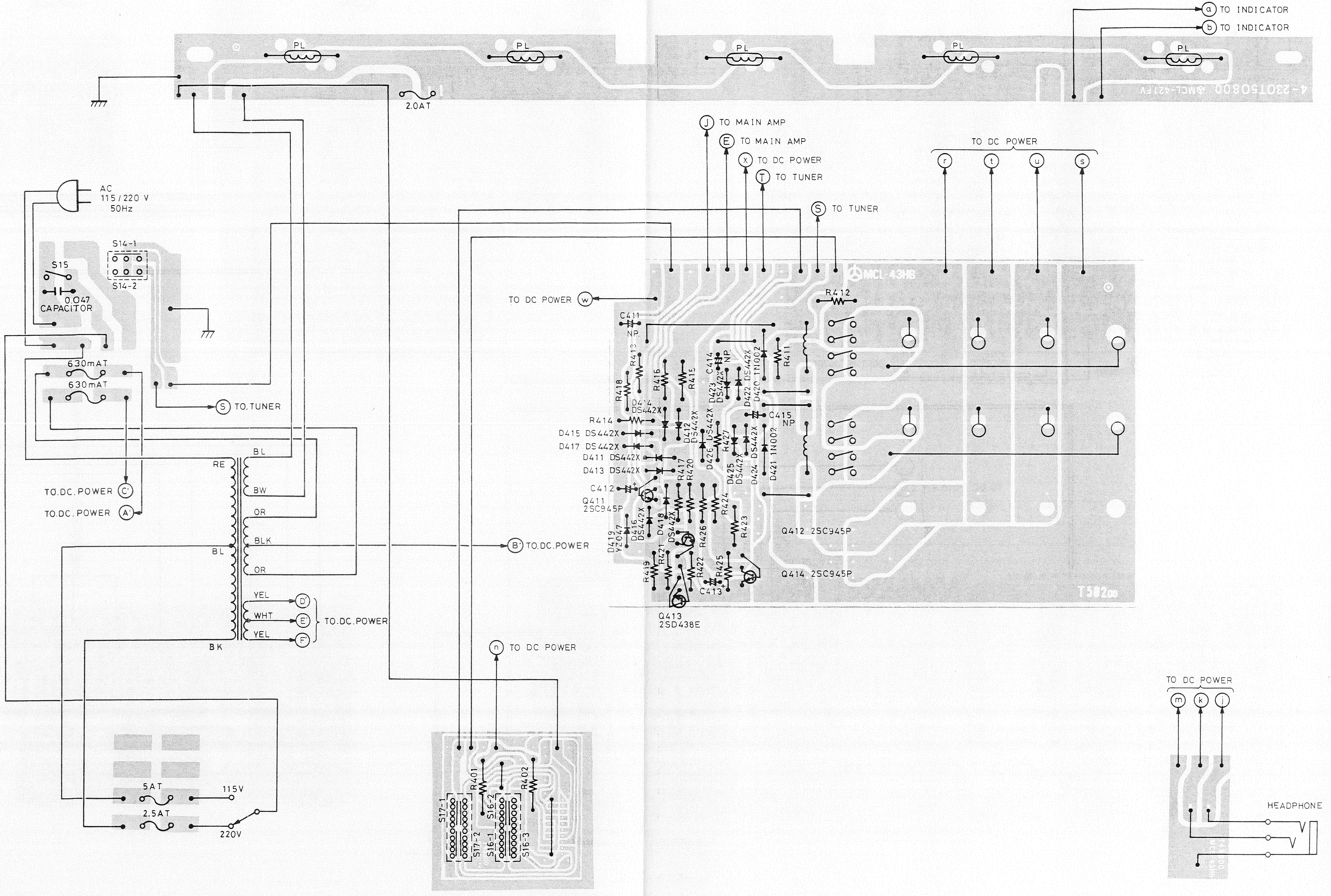
MUTING

WIRING DIAGRAM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E TO MAIN AMP
X TO DC POWER
T TO TUNER
S TO TUNER
TO DC POWER
r
t
u
s
AC
115/220 V
50Hz
S14-1
S14-2
S15
0.047
CAPACITOR
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630mAT
S TO.TUNER
TO DC POWER w
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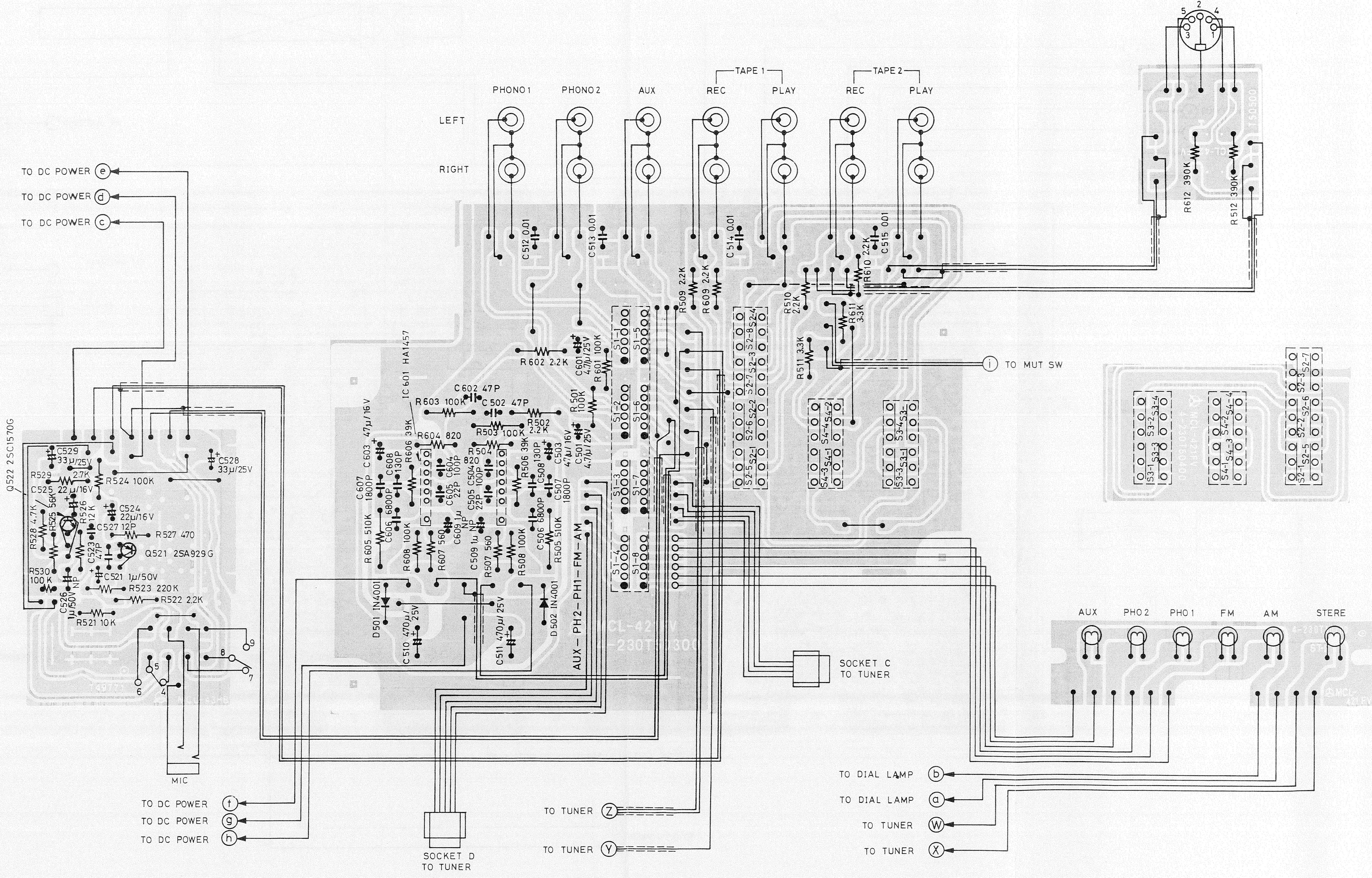
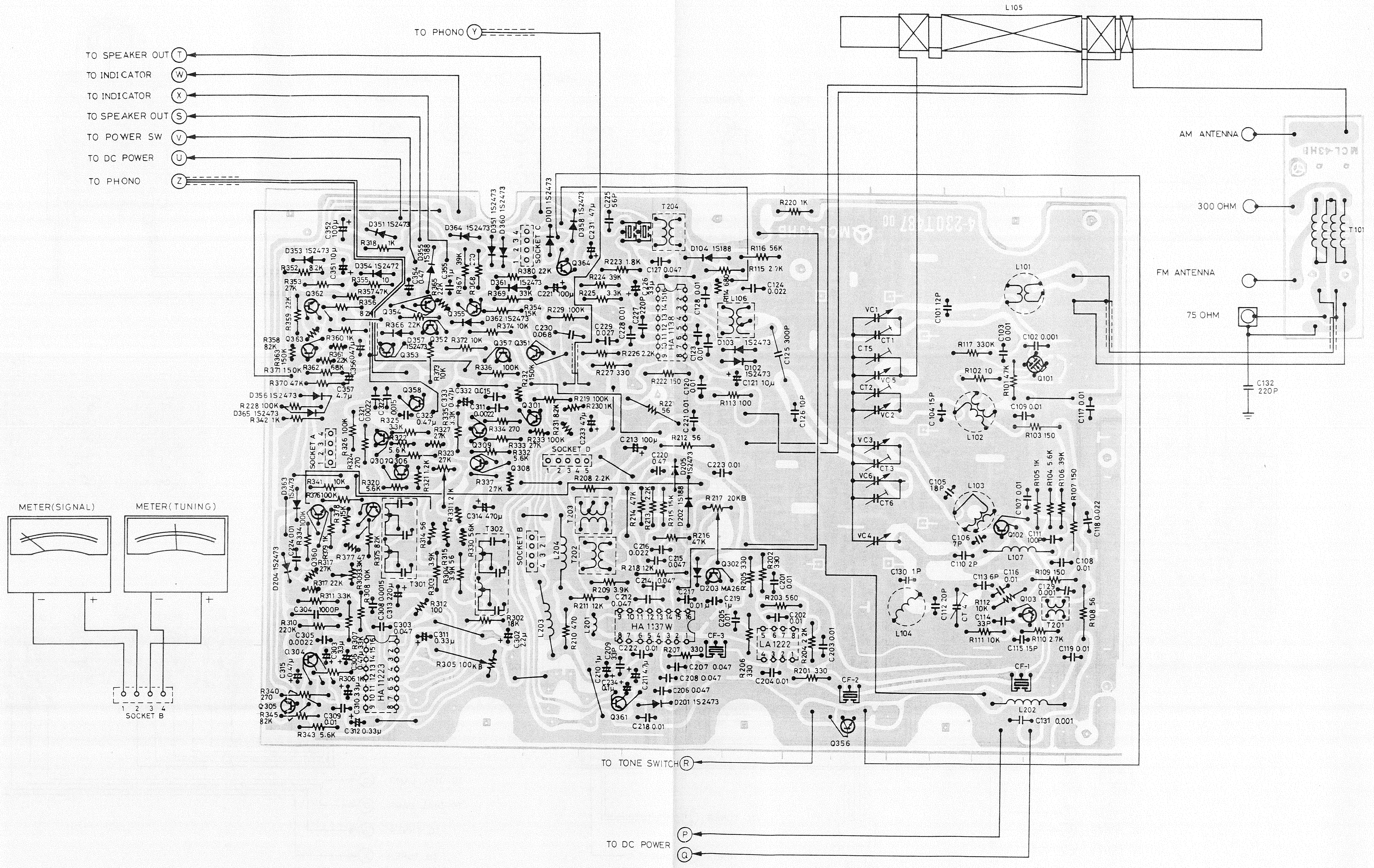
R412
C411
NP.
R413
R418
R416
R415
C414
NP.
D423
DS442X
D422 DS442X
D420 1N002
R411
D414
DS442X
R414
D415 DS442X
D417 DS442X
D411 DS442X
D413 DS442X
D412
DS442X
DS442X
D426
R427
D425
DS442X
D424 DS442X
D421 1N002
C415
NP
R417
R420
C412
Q411
2SC945P
D419
YZ047
D416
DS442X
D418
DS442X
R426
R424
R423
Q412 2SC945P
R419
R421
R422
R425
C413
Q414 2SC945P
Q413
2SD438E
T502
RE
BL
BW
OR
BLK
BL
OR
YEL
WHT
YEL
BK
TO.DC.POWER C'
TO.DC.POWER A'
B' TO.DC.POWER
D'
E'
F'
TO.DC.POWER
n TO DC POWER
5AT
115V
2.5AT
220V
S17-1
S17-2
R401
S16-1
S16-2
S16-3
R402
TO DC POWER
m
k
j
HEADPHONE
MCL-43HB

WIRING DIAGRAM

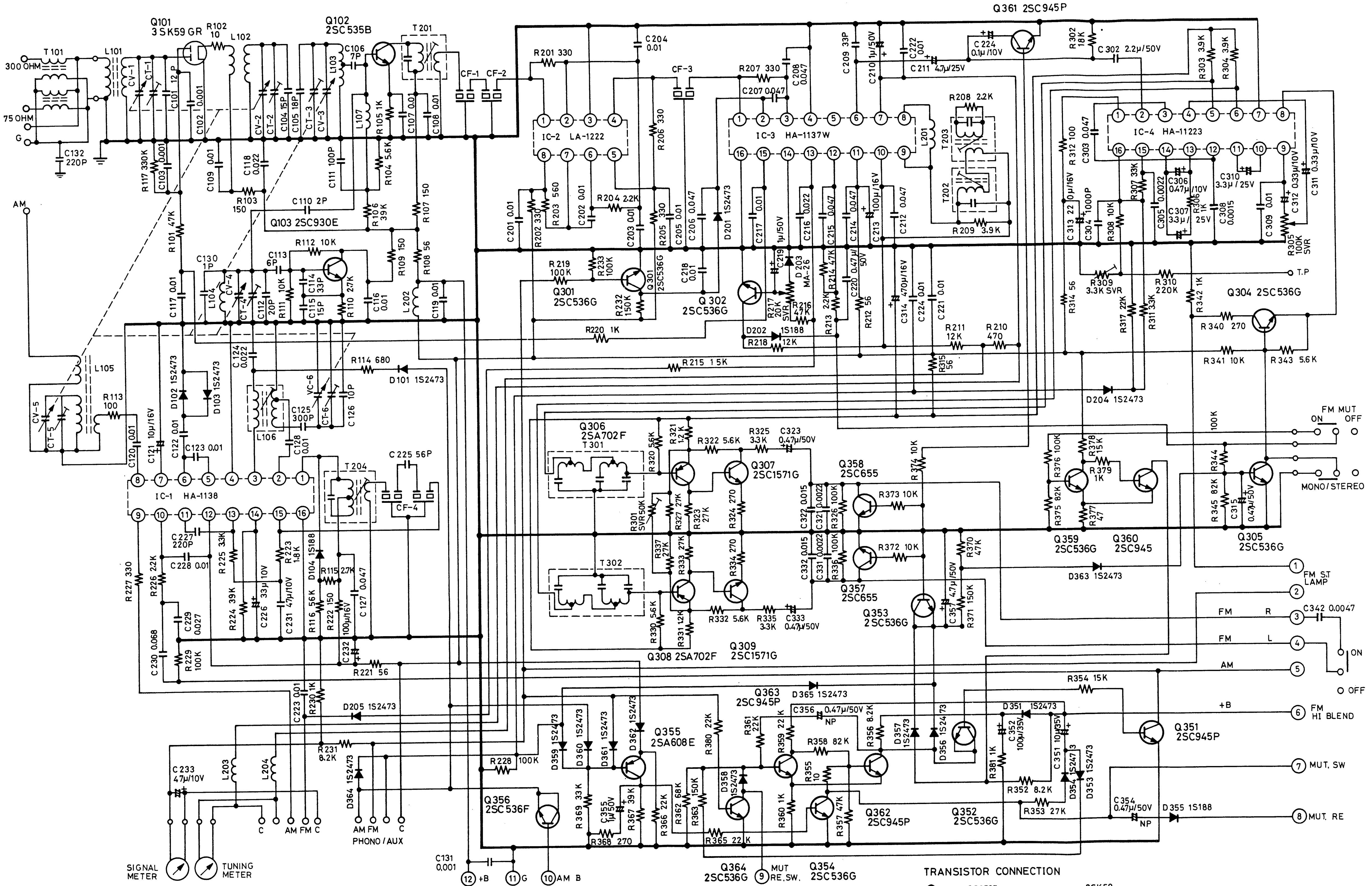


PHONO 1
PHONO 2
AUX
TAPE 1
REC
PLAY
TAPE 2
REC
PLAY
LEFT
RIGHT
TO DC POWER (e)
TO DC POWER (d)
TO DC POWER (c)
C512 0.01
C513 0.01
C514 0.01
C515 0.01
R509 2.2K
R609 2.2K
R510 2.2K
R610 2.2K
R611 3.3K
R511 3.3K
R612 390K
R512 390K
TO MUT SW (i)
IC601 HA1457
C602 47P
C502 47P
R603 100K
R502 2.2K
R503 100K
R602 2.2K
C601 4.7μ/25V
R601 100K
R501 100K
C501 4.7μ/25V
C503 47μ/16V
C603 47μ/16V
R604 820
R504 820
R606 39K
R506 39K
C608 130P
C508 130P
C607 1800P
C507 1800P
C604 100P
C605 22P
C504 100P
C505 22P
C606 6800P
C506 6800P
R605 510K
R505 510K
R608 100K
R508 100K
R607 560
R507 560
C609 1μ NP
C509 1μ
D501 1N4001
D502 1N4001
C510 470μ/25V
C511 470μ/25V
AUX-PH2-PH1-FM-AM
S1-1
S1-2
S1-3
S1-4
S1-5
S1-6
S1-7
S1-8
S2-1
S2-2
S2-3
S2-4
S2-5
S2-6
S2-7
S2-8
S3-1
S3-2
S3-3
S3-4
S4-1
S4-2
S4-3
S4-4
Q522 2SC1570G
C529 33μ/25V
C528 33μ/25V
R529 2.7K
R524 100K
C525 22μ/16V
R525 56K
R526 12K
R528 4.7K
C524 22μ/16V
C527 12P
C523 47P
R527 470
Q521 2SA929G
R530 100K
C521 1μ/50V
C526 1μ/50V NP
R523 220K
R522 2.2K
R521 10K
MIC
TO DC POWER (f)
TO DC POWER (g)
TO DC POWER (h)
SOCKET D TO TUNER
TO TUNER (Z)
TO TUNER (Y)
SOCKET C TO TUNER
AUX
PHO 2
PHO 1
FM
AM
STERE
TO DIAL LAMP (b)
TO DIAL LAMP (a)
TO TUNER (W)
TO TUNER (X)
MCL-421FV

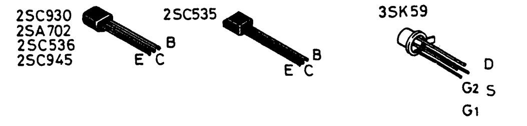
WIRING DIAGRAM


TO PHONO Ⓨ
TO SPEAKER OUT Ⓣ
TO INDICATOR Ⓦ
TO INDICATOR Ⓧ
TO SPEAKER OUT Ⓢ
TO POWER SW Ⓥ
TO DC POWER Ⓤ
TO PHONO Ⓩ
L105
AM ANTENNA
300 OHM
FM ANTENNA
75 OHM
T101
MCL-43HB
C132 220P
METER(SIGNAL)
METER(TUNING)
SOCKET B
SOCKET A
SOCKET C
SOCKET D
T204
T203
T202
T301
T302
T201
HA 1138
HA 1137W
HA 11223
LA 1222
L101
L102
L103
L104
L106
L107
L201
L202
L203
L204
VC1
VC2
VC3
VC4
VC5
VC6
CT1
CT2
CT3
CT4
CT5
CT6
CF-1
CF-2
CF-3
Q101
Q102
Q103
Q356
Q361
4-230T487 00
TO TONE SWITCH Ⓡ
TO DC POWER Ⓟ
Ⓠ

SCHEMATIC DIAGRAM (TUNER)


Q101 3SK59GR
R102 10
L102
Q102 2SC535B
C106 7P
T201
T101
L101
300 OHM
75 OHM
G
C132 220P
CV-1
CT-1
C101 12P
C102 0.001
CV-2
CT-2
C104 15P
C105 18P
CT-3
CV-3
L103
L107
R105 1K
C107 0.01
C108 0.01
CF-1
CF-2
R117 330K
C103 0.001
C109 0.01
C118 0.022
C111 100P
R104 5.6K
R106 39K
R107 150
R103 150
C110 2P
Q103 2SC930E
AM
R101 47K
R112 10K
C113 6P
C130 1P
L104
CV-4
CT-4
C112 20P
R111 10K
C114 33P
C115 15P
R110 27K
C116 0.01
R109 150
R108 56
L202
C119 0.01
C117 0.01
L105
CV-5
CT-5
R113 100
C120 0.01
C121 10μ/16V
C122 0.01
C123 0.01
D102 1S2473
D103 1S2473
C124 0.022
R114 680
D101 1S2473
VC-6
CT-6
C125 300P
C126 10P
L106
C128 0.01
T204
C225 56P
CF-4
IC-1 HA-1138
C227 220P
C228 0.01
R225 33K
R223 1.8K
D104 1S188
R115 2.7K
C127 0.047
R227 330
R226 2.2K
C229 0.027
R224 39K
C226 33μ 10V
C231 47μ/10V
R116 56K
R222 150
C232 100μ/16V
R221 56
C230 0.068
R229 100K
C223 0.01
R230 1K
D205 1S2473
R231 8.2K
C233 47μ/10V
L203
L204
D364 1S2473
SIGNAL METER
TUNING METER
C
AM FM C
AM FM C
PHONO / AUX
C131 0.001
⑫ +B
⑪ G
⑩ AM B
R201 330
C204 0.01
CF-3
R207 330
C208 0.047
C207 0.047
C209 33P
C210 1μ/50V
C222 0.01
C211 4.7μ/25V
C224 0.1μ/10V
Q361 2SC945P
R302 18K
C302 2.2μ/50V
R303 3.9K
R304 3.9K
IC-2 LA-1222
IC-3 HA-1137W
IC-4 HA-11223
R208 2.2K
L201
T203
T202
R209 3.9K
R206 330
C201 0.01
R202 330
R203 560
C202 0.01
R204 2.2K
C203 0.01
R205 330
C205 0.01
C206 0.047
D201 1S2473
C217 0.01
C216 0.022
C215 0.047
C214 0.047
C213 100μ/16V
C212 0.047
R219 100K
R233 100K
Q301 2SC536G
R232 150K
C218 0.01
Q302 2SC536G
C219 1μ/50V
D203 MA-26
R214 47K
C220 0.47μ/50V
R217 20K SVR
R216 47K
R213 2.2K
R212 56
C314 470μ/16V
C224 0.01
C221 0.01
D202 1S188
R218 12K
R220 1K
R211 12K
R210 470
R215 15K
R205 56
R312 100
C303 0.047
C313 22 0μ/16V
C304 1000P
R307 33K
C305 0.0022
C306 0.47μ/10V
C307 3.3μ/25V
R306 1K
C308 0.0015
C310 3.3μ/25V
C309 0.01
C312 0.33μ/10V
C311 0.33μ/10V
R305 100K SVR
R308 10K
R309 3.3K SVR
R310 220K
T.P
R314 56
R317 22K
R311 33K
R342 1K
Q304 2SC536G
R340 270
R341 10K
R343 5.6K
D204 1S2473
FM MUT
ON
OFF
MONO/STEREO
Q306 2SA702F
T301
R320 5.6K
R321 1.2K
R322 5.6K
R325 3.3K
C323 0.47μ/50V
Q307 2SC1571G
R374 10K
Q358 2SC655
R373 10K
R376 100K
R378 15K
R379 1K
R375 82K
R377 47
R344
R345 82K
C315 0.47μ/10V
100K
R301 SVR50K
R327 27K
R323 27K
R324 270
C322 0.015
C321 0.0022
R326 100K
Q359 2SC536G
Q360 2SC945
Q305 2SC536G
T302
R337 27K
R333 27K
R334 270
C332 0.015
C331 0.0022
R336 100K
R372 10K
R370 47K
D363 1S2473
① FM ST. LAMP
②
Q357 2SC655
Q353 2SC536G
C357 4.7μ/50V
R371 150K
R330 5.6K
R331 12K
R332 5.6K
R335 3.3K
C333 0.47μ/50V
Q308 2SA702F
Q309 2SC1571G
FM R
③
C342 0.0047
FM L
④
ON
AM
⑤
OFF
Q363 2SC945P
D365 1S2473
R354 15K
+B
⑥ FM HI BLEND
D359 1S2473
D360 1S2473
D361 1S2473
D362 1S2473
Q355 2SA608E
R380 22K
R361 22K
R359 22K
C356 0.47μ/50V NP
R356 8.2K
D357 1S2473
D356 1S2473
C352 100μ/35V
D351 1S2473
C351 10μ/35V
Q351 2SC945P
R228 100K
R358 82K
R355 10
R381 1K
D354 1S2473
D353 1S2473
⑦ MUT. SW
R352 8.2K
R353 27K
Q356 2SC536F
R369 33K
C355 1μ/50V
R367 39K
R366 22K
R362 68K
R363 150K
D358 1S2473
R360 1K
R357 47K
Q362 2SC945P
Q352 2SC536G
C354 0.47μ/50V NP
D355 1S188
⑧ MUT. RE
R368 270
R365 22K
Q364 2SC536G
⑨ MUT RE.SW.
Q354 2SC536G

TRANSISTOR CONNECTION


2SC930
2SA702
2SC536
2SC945
E
C
B
2SC535
E
C
B
3SK59
D
G2
S
G1

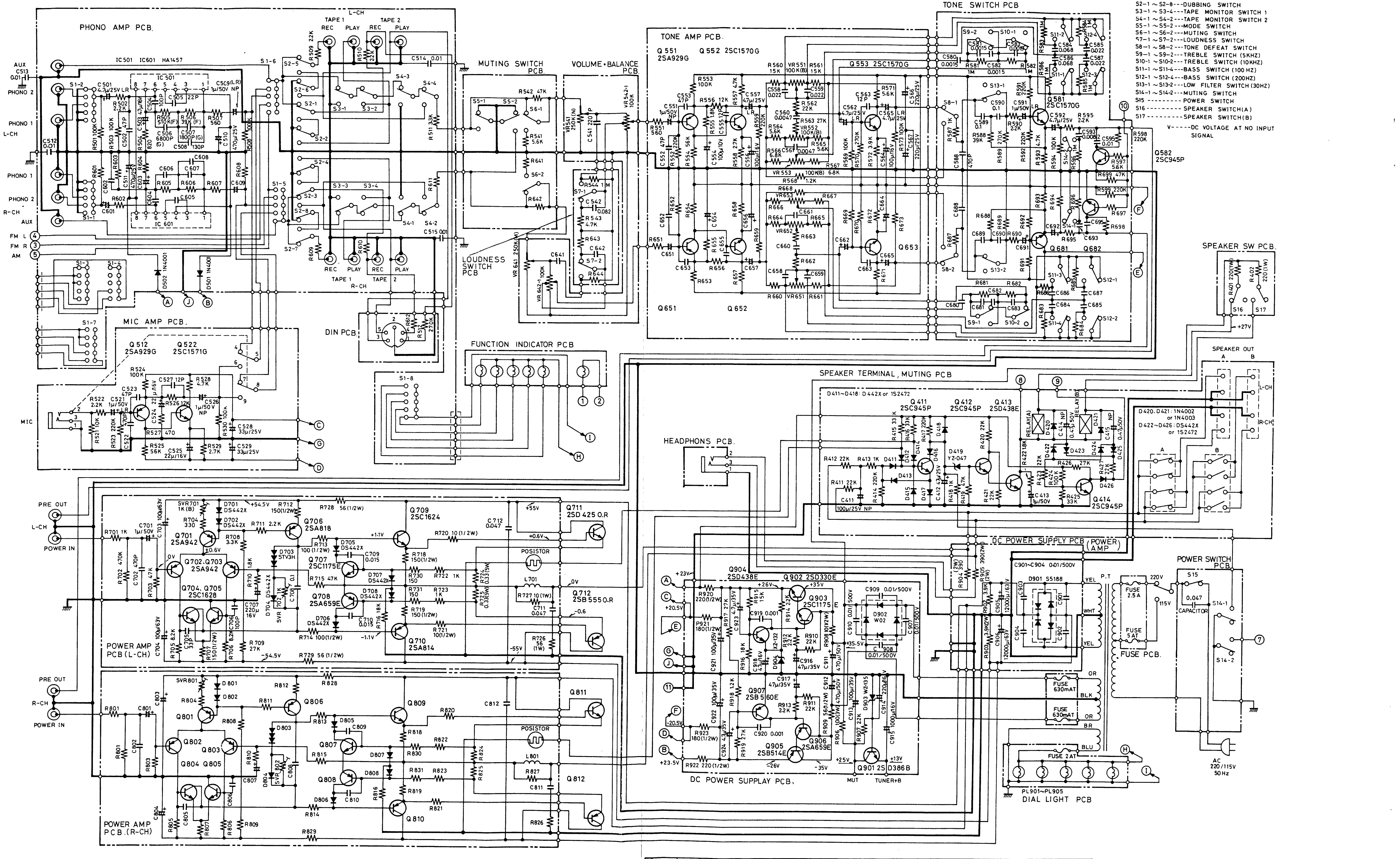
Voltage of Transistors (V)

Q101		Q102		Q103	Q306 Q308	Q307 Q309	Q357,358 Q351,361	Q359	Q360	
G1	0									
G2	4.2	B	1,4	5,57	9,81	0,91	0	0,66	0,1	
D	9,6	C	11,5	11,29	0,91	4,23	0	0,1	12,2	
S	0	E	0,84	4,9	10,34	0.3	0	0,03	0,03	
Q304		Q305		Q355	Q363	Q362	Q354	Q353	Q352	Q356
B	0.07	B	0	11,88	0.59	2,92	0	0	0	-0,2 V
C	11,47	C	0,07	0	11,94	2,32	2,92	1,9	2,32	12 V
E	0,07	E	0	11,86	2,28	2,28	0	1,91	2,32	12 V

Voltage of ICs

IC 1				IC 2		IC 3				IC 4			
1	9,88	9	0	1	1,3	1	1,97	9	5,5	1	10,16	9	5,87
2	2,68	10	3,63	2	1,3	2	1,97	10	5,51	2	3,47	10	2,72
3	11,45	11	4,11	3	0	3	1,97	11	11,42	3	4,72	11	2,73
4	9,88	12	11,43	4	10,7	4	0	12	3,8	4	2,59	12	2,74
5	4,72	13	2,66	5	11,35	5	0	13	0,57	5	9,73	13	2,74
6	7,86	14	2,8	6	1,29	6	5,44	14	0	6	9,75	14	2,74
7	1,92	15	2,62	7	9,64	7	5,57	15	4,76	7	0	15	4,5
8	0,87	16	0	8	10,61	8	5,49	16	0	8	0	16	2,95

SCHEMATIC DIAGRAM



S1-1 ~ S1-8---FUNCTION SWITCH
S2-1 ~ S2-8---DUBBING SWITCH
S3-1 ~ S3-4---TAPE MONITOR SWITCH 1
S4-1 ~ S4-2---TAPE MONITOR SWITCH 2
S5-1 ~ S5-2---MODE SWITCH
S6-1 ~ S6-2---MUTING SWITCH
S7-1 ~ S7-2---LOUDNESS SWITCH
S8-1 ~ S8-2---TONE DEFEAT SWITCH
S9-1 ~ S9-2---TREBLE SWITCH (5KHZ)
S10-1 ~ S10-2---TREBLE SWITCH (10KHZ)
S11-1 ~ S11-4---BASS SWITCH (100 HZ)
S12-1 ~ S12-4---BASS SWITCH (200HZ)
S13-1 ~ S13-2---LOW FILTER SWITCH (30HZ)
S14-1 ~ S14-2---MUTING SWITCH
S15 ----------POWER SWITCH
S16 ----------SPEAKER SWITCH(A)
S17 ----------SPEAKER SWITCH(B)

V-----DC VOLTAGE AT NO INPUT SIGNAL

IC 501, 601 HA1457							
1	2	3	4	5	6	7	8
0.2 V	—	0.1 V	22.5 V	21.5 V	0 V	0.1 V	22.5 V

	Q411	Q412	Q413	Q414	Q901	Q902	Q903	Q904	Q905	Q906	Q907
B	0 V	1,2 V	-0,6 V	0,6 V	13,6V	26,6 V	27,2V	14.0 V	-25,4 V	-24,8V	-0,55 V
C	4.3 V	0,7 V	0 V	0 V	25,0V	35,0V	34.0V	27.2 V	-35.0 V	-34,2 V	-27,0 V
E	0 V	0,6 V	0 V	0 V	13.0 V	26,0V	26,6V	13,4V	-26 V	-25,4V	0 V

	Q521 Q621	Q522 Q622	Q551 Q651	Q552 Q652	Q553 Q653	Q581 Q681	Q582 Q682	Q701 Q801	Q702 Q802	Q703 Q803	Q704 Q804	Q705 Q805	Q706 Q806	Q707 Q807	Q708 Q808	Q709 Q809	Q710 Q810	Q711 Q811	Q712 Q812
B	0,1 V	-8,6 V	0.1 V	-8,6 V	-6,0 V	-0,9 V	-3,6 V	53.3V	0 V	0 V	-51.0V	-51.0V	53.3V	24mV	20mV	1.1 V	-1.1 V	0,6V	-0,6 V
C	-8,6 V	1,0 V	-9,6 V	1.0V	1,0 V	20,6 V	0 V	0,6 V	-51,0 V	-51,0V	-1,1 V	0 V	1,1 V	1,1 V	-1,1 V	54,5V	-54,5V	54,5V	-54,5V
E	0,7 V	-9,2V	0,7 V	-9,2V	-6,6 V	-1,5 V	0 V	52.7V	0.6 V	0.6 V	-51.7V	-51.7 V	53,9V	0 V	0 V	0,6 V	-0.6 V	24mV	20mV

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Osaka-fu, 570 Japan

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